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Canada. Royal commission on the  
Great Slave Lake Railway.

Hearings. v. 8-9. 1959

1960















**ROYAL COMMISSION**  
**ON**  
**GREAT SLAVE LAKE RAILWAY**

**HEARINGS**

HELD AT  
EDMONTON, ALBERTA

VOLUME No.:

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ROYAL COMMISSION ON  
THE GREAT SLAVE LAKE RAILWAY

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Hearings of the Royal Commission on  
the Great Slave Lake Railway held  
at the Court House, Edmonton, Alberta,  
at 9.00 a.m., September 18, 1959

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PRESENT:

MR. M. E. MANNING	Chairman
MR. WALTER D. GAINER	Member
MR. JOHN ANDERSON-THOMPSON	Member

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MR. FRANCIS M. FEEHAN	Counsel
ME. A. PATERSON	Secretary

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SUBMISSION OF  
THE GOVERNMENT OF THE PROVINCE  
OF BRITISH COLUMBIA

Appearances:

Honourable R. W. Bonner, Q.C.	Attorney General and Minister of the Department of Industrial Development, Trade and Commerce
Mr. J. J. Southworth	Consultant
Mr. H. L. Roethel	
Mr. Arthur Fouks	Counsel

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MR. BALDWIN: I wonder, Mr. Chairman, if I might make an observation at this time in connection with some of the briefs?

THE CHAIRMAN: Yes.

MR. BALDWIN: I realise that there has been difficulty with some of them coming in, and I believe that next week we are going to be free so far as the Commission is concerned.

THE CHAIRMAN: Yes.

MR. BALDWIN: And we will start again on Monday.

I was particularly thinking of the brief of the Edmonton Chamber and the railway companies.

I think you realise better than anyone else the necessity for a prepared brief in connection with the cross-examination on certain matters.

THE CHAIRMAN: You would like to get the briefs?









MR. BALDWIN: If they come in during the next week would it be possible for, say, myself, and I am sure, for the counsel for the British Columbia Government, to secure copies of them so that we will have had an opportunity to familiarize ourselves with the contents and so that we can, possibly, even contact Mr. Feehan and discuss the matters with him before we open on Monday?

THE SECRETARY: The railway brief is in this morning.

THE CHAIRMAN: We have the railway brief this morning. That will be available. Is that so, Mr. Paterson?

THE SECRETARY: Yes.

MR. BALDWIN: That is excellent.

THE CHAIRMAN: What about the Chambers of Commerce at Calgary and Edmonton?

MR. GRIMBLE: We have three pages to bind; there are three pages that require redrafting. I had hoped to get them yesterday, but I spent the whole day here.

THE CHAIRMAN: That, perhaps, will clear the matter up.

Are there any other briefs that we were expecting that we haven't got in yet, that you would like to have?

THE SECRETARY: No -- other than the west coast.

THE CHAIRMAN: I suppose there will be a brief









from West Coast Transmissions, and if so we will let you know about it.

MR. FOUKS: I am not too sure if West Coast will be presenting a brief, but Dr. Hume said he would be present during that week -- that will be the 29th -- and be available for discussion and cross-examination.

THE CHAIRMAN: All right.

Is there anything else before we go on with Mr. Bonner's brief for the British Columbia Government?

Does anyone know about the British Columbia Chamber of Commerce? We understood the Chamber was going to file a brief.

MR. FOUKS: They are merely, I understand, going to send a letter, and it will not be a brief.

THE CHAIRMAN: Will it contain any effect-  
ual material?

MR. ELMER: I couldn't tell you; they just told me they were sending a letter in, Mr. Chairman.

MR. FOUKS: I don't think it will contain information that will require cross-examination by the Commission.

THE CHAIRMAN: Mr. Bonner, you are going to give us the brief for your Government, are you?

MR. BONNER: Yes.

THE CHAIRMAN: Will you present it from there, and any way you like, and if you wish to elaborate on it as you go along you are free to do that. We have reporters here who are taking down everything









MR. BONNER: Mr. Justice Manning and Commissioners, I want just to express my very great appreciation for the arrangements which the Commission has afforded the Government of British Columbia as a result of discussions with our counsel in the days which have preceded today.

The matter of the Great Slave Lake railway is one of interest to us as a Province as it has been of interest to the Province of Alberta.

If I may refer to a remark, *ex curiae* so to speak, the fact that we do appear to have taken an elaborate interest in this question by the presence surrounding us of a number of technical advisers, I would like to say for the record that our approach to this question was conditioned by our examination of the proposal with officials of the Department of Northern Affairs and National Resources when this question became public some many months ago.

It is not for the record of this Commission, necessarily, but it is a matter of information which is more or less public, that very nearly a year ago Mr. Baldwin -- our learned friend knows the dates because of his interest in it -- but just about at the time when the imminence of railway construction to Pine Point became public and the likelihood of a certain route appeared to be the policy of the Northern Affairs Department, we were concerned, because of our interest in the Peace River block, to make representations









urging that a water examination of the merits of alternate routes to the Northwest Territories might be given consideration.

I think at that time we were, possibly, the most vocal in urging this water examination.

So far as Provincial Governments are concerned, though, it is a matter of record that a member of the Federal House of Commons joined in the demand which was made upon the national Government at that time, referring only in general terms and only for the purpose of giving perspective to their positions, to the conversations which occurred with officials of the Northern Affairs Department. It became apparent to us that the water examination, if it were to occur, would have to involve a very deliberate appreciation of relative notions of desirability from a variety of points of view and not primarily associated with feasibility.

In no portion of any discussions that I personally have had has any question of feasibility of eastern as against western route appeared to be a matter of concern to the Department; and, therefore, I take it that, unless something of which we are not presently aware should emerge that indicates a desire to go in one way or the other, feasibility at this point appears to be a matter of something that can be worked out.

I say that on the basis that it was not a notion that we felt concerned to meet in the course of this type of examination, although I realise it is not









a question which is to be ignored in the long run.

THE CHAIRMAN: I take it you are suggesting, Mr. Bonner, that if a route is feasible the question is which is the more desirable?

MR. BONNER: That is my position at the moment; and I am encouraged in that view as a result of informal discussions which have taken place prior and which are not a matter of record for the Commission.

I simply wish to make that point clear and to indicate to the Commission, if I might, that we have approached it primarily from an economic standpoint and sociological standpoint, and opinions at a later time can be expressed as to the detailed engineering.

THE CHAIRMAN: Yes.

MR. BONNER: I am fortified in the view that this is the correct approach on the basis of two national examples, really. When Sir John A. Mac Donald was the architect of the national policy by which Canada became a Nation it was not a question of engineering feasibility whether this continent could be connected by steel; it was a question of social, political and economical desirability; and eventually the continent was so connected, and the results which have flowed from the presence of a railway from coast to coast are almost of the sort of which this Commission might take judicial note.

Secondly, in our own Province in recent years, in British Columbia, we were faced with the problem of









providing an economic connection with our own border between the centre of our population, which, for all practical purposes, lies within a radius of 100 miles of Vancouver -- I would say about 70 per cent of our people lie within the ambit of a circle drawn within that radius -- and the Peace River block which lay beyond the Rocky Mountains, which had such immense promise in the Province so far as gas, oil and exploration are concerned.

I might say, if I might refer to my practical experience in this thing, that we had lengthy debates as to feasibility even prior to our Government taking office, and, linked with that, was some doubt, even, until recent times of desirability; but, finally, we were able to decide that it was desirable, and engineering being what it is, it was found to be feasible. Since that time the impact of rail connection between the centre of our Province and the region of near resources has opened up the interior of our Province to an extent which could not have been imagined 5 years ago.

I think we have in excess now of 600 saw mills supplying wood products to the Provincial Railway, to the extent now that the growth in the central interior of our Province is as to 48 against 52 per cent for the coast. And, if I may go on in a more general way for a moment, this has given great economic balance, because during the strike which has just been settled, when our coast industries went out entirely, nevertheless we were









able to maintain forestry shipments on our railways by our interior cut.

I am just indicating, if I may, in a more general way, again, the impact of a railway on a region, which, in our experience, has proved to be beneficial in the sense that in our gas and oil explorations, considering the West Coast Transmission Company's pipeline, it might have been virtually impossible to have that industry now, for instance, without the economy which was provided by the railway which provided the heavy transport of pipe and such material required in its construction.

Associated with me this morning is Mr. Southworth who knows, in more particular detail, the ramifications on that point and, perhaps, could explain that.

Having made those general observations I would like to express appreciation as well that in the presentation of the brief this morning, if it is agreeable to the Commission, questions of particularity might be referred to those who are appearing with me.

Mr. Guest -- Mr. J.R. Guest -- is one of our economists in the Department of Trade and Industry, and he is nationally acknowledged as a person knowledgeable in freight problems. As a matter of fact, at the moment he is in Ottawa appearing on behalf of the Province in connection with an inquiry which is going on there with the national Government.

THE CHAIRMAN: Mr. Guest will be here, will he?









MR. BONNER: Yes. He is not here this morning, but he will be available at a later time.

Mr. Wilson, who is one of our research assistants, is mentioned on the frontispiece but his knowledge is not of such a particular nature that I think he should be called upon.

Mr. Roethel, on the other hand, is a professional engineer and has been adviser to the Forestry Department and is well known in matters pertaining to forestry.

Mr. Southworth is an economic geographer by profession, with considerable practical experience in the north country and a man whom we have been fortunate to secure as consultant. He has advised himself, in particular, about economic geography as it affects our proposals generally.

My learned friend, Mr. Fouks has appeared as general counsel to try to keep us all in a line of useful activity so far as the purposes of the Commission are concerned.

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I would next direct the Commission's attention to the fact that there appears on the addenda to the brief a number of statements. I would draw your attention to page 36, at which I am looking now. In connection with these addenda a number of names appear -- Dr. Hume, Professor Forward, Dean Bentley, and a further statement which has been secured since the publication of the brief, and with the permission of the Commission I would make reference to a statement by Mr. G. McNab, President of the Alberta West Forest Products Corporation Limited, of Edmonton, who speaks about the pulp prospects.

My point in referring to the addenda and their sources is to say that I am advised that the persons whose statements appear here will appear before the Commission in connection with these statements in the brief itself, and I had hoped this would be of some assistance to your Inquiry.

I would like, if I may, now to proceed to the brief itself. The only matter that I direct to the Commission's attention is the fact that on the page which appears on the cover there is a map in which the Peace River block is indicated in yellow. That block, as you see, straddles the Alberta-British Columbia border, and therefore I reiterate that our interest in this matter lies in the fact that anything which promotes the Peace River block is bound to be good for the Province of British Columbia as









well as it is for the Province of Alberta, which has already made a statement before you, and it is in connection with the interest which we have jointly with the Province of Alberta in this important region of Canada that we are here this morning.

The Government of British Columbia is pleased to present to the Royal Commission on the Great Slave Lake Railway the following brief outlining its views on the alternative routes suggested for the proposed line from Northern Alberta to Pine Point, Mackenzie District, Northwest Territories.

The purpose of this Government in making the present submission is twofold:

- (a) In the national interest, it is felt that the proposed rail extension constitutes an important and necessary initial step in the development of the resources of the Mackenzie District and will make a major contribution to the expansion, growth, and development of Northern Canada.
- (b) As a partner with the Province of Alberta in responsibility for the geographical region known as the Peace River District, which lies partly within British Columbia boundaries, this Province wishes to make available its special knowledge of the said area in view of the fact that two of three proposed railway routes run through the Peace River District.









The Government of British Columbia believes that careful and far-sighted selection of the regions through which the railway will pass can add materially to its total impact upon the national economy. With this consideration in mind, the following facts and findings have been compiled and are now respectfully submitted to assist the Royal Commission in its examination of the respective merits of the proposed routes.

#### Description of the Alternative Routes

Although the MacGregor Report lists some ten possible routes for the railway, three appear to be most practical. These routes are outlined on the accompanying map.

Briefly, the routes may be described as follows:

- (a) Originating at McMurray, following the Athabasca River north to Embrass, thence west of Lake Claire to Peace Point on the Peace River. Once across Peace River the line runs through Wood Buffalo National Park to Pine Point. Two major river crossings are required.
- (b) Originating at Grimshaw in the heart of the Peace River District, following the Peace River north and then, turning somewhat to the east near Watt Mountain, continues to Pine Point. No major river crossings are required.
- (c) Originating at Grimshaw and following the









Peace River both north and east to Peace Point, thence through Wood Buffalo Park along the final portion of the route proposed in (a) to Pine Point. This route also has the advantage of no major river crossings.

Route (a) is commonly referred to as the East Route and route (b) is commonly referred to as the West Route. Route (c) is a compromise selection between the two routes and was proposed as a means whereby both the Peace River District and Wood Buffalo Park area could be served. To do this additional mileage would be added to the line.

It is not within the scope of this brief to attempt an assessment of the gains to be made by reaching Wood Buffalo Park at the expense of extra rail distance. In most aspects the argument for route (b) applies equally to route (c), providing the extra costs are justified by the advantages to be gained.

#### Fundamental Considerations

The full terms of reference for the Commission are to "inquire into and report upon the respective merits of the alternative routes which might be followed by a railway line to be built from northern Alberta into the southern portion of the District of Mackenzie, Northwest Territories, for the purpose of providing access to and contributing to the development of that portion of the Territories tributary to Great Slave Lake."









It is the purpose of this brief to examine the respective merits of the routes proposed for the railway and bring to the attention of the Commissioners the results of findings of the investigations which the Government of British Columbia has undertaken.

The fundamental considerations in the selection of a route for the railway are said to be:

- (1) That it is part of a proposed National Development Plan.

I think we have means of recognizing this in the sense that this has been a notion present at the two recent national campaigns which have been very generously endorsed by the people of Canada.

- (2) That it seeks the opening up and development of northern regions and to assist those regions now in the process of establishing themselves, and that it offers the opportunity for agricultural and mineral development.

In contemplating northern development the Northern Development Conference was advised that a grave mistake would be made by building the railway to the north on purely economic factors ignoring sociological and local benefits.

Statement of Position of the  
Government of British Columbia

In the preparation of the brief the Government of British Columbia made detailed investigation into the various factors supporting both the East









and West Routes and sought authoritative opinions on their merits wherever possible. Aided by the information obtained and guided by the considerations said to be fundamental to the selection of a route, the Government of British Columbia contends that:

- (a) The railway should follow the West Route in order that the potential offered by the extensive developmental possibilities of the Peace River region may be fully realized;
- (b) Little opportunity for community growth and economic development is offered along the East Route;
- (c) The East Route would generate less traffic for the railway than would the route through the Peace River District.

In support of this position the findings of the investigation undertaken are reported in the following section of the brief.

You will notice that I have gone from east to west on a comparative basis stating conclusions, and I begin now with an examination of mineral development in the eastern region.

THE CHAIRMAN: You are now reviewing the argument?

HON. MR. BONNER: Yes. This is not a recognition of argument advanced before the Commission but an examination of possible points of contention.









I understand it is the wish of the Commission that we will have an opportunity to present a brief in rebuttal. I don't know to what extent that will be necessary or useful to the Commission, but we would like the opportunity. But I wish to say that this brief has not been presented in rebuttal to any evidence which has been filed before the Commission.

This statement has been prepared by Dr. G. S. Hume, and you will note in this connection his full statement appears on page 15 of the addendum.

The oil sands were first described by members of the Geological Survey of Canada three-quarters of a century ago. It seemed easy with so much oil-rich source material readily available to exploit these deposits, but experience over many years by well-trained scientists has demonstrated that the processes involved in separation and treatment are intricate, involve huge capital outlays and are highly risky for commercial enterprise. It should be noted here that the current proposal to experiment with atomic energy on the oil sands does not really alter this statement. The prospect of setting off a bomb in the midst of bituminous material has a number of interesting visions in one's mind. I don't know what happens to oil when it is met with the temperatures of the sun.

It is inevitable that the oil sands will ultimately come under commercial exploitation, but









three conditions are necessary for them to face a strong and rapidly increasing competition from other sources. These conditions are:

- (1) Discovery of new processes involving much cheaper methods of producing petroleum products than presently known.

I think it may be possible, if questions would permit, to indicate that the Royalite Company has done extensive research in this connection. To what extent they are a success as commercial is something I won't make note of this morning.

THE CHAIRMAN: We have had a brief from the Royalite Company, Mr. Bonner.

HON. MR. BONNER:

- (2) Cut-off of competitive supplies from other parts of the world by international crisis, etc.
- (3) Construction of a pipe line to a major collection and redistribution point.

Assuming the above conditions actually arose and the oil sands became commercially productive, the question would then be the amount of influence which this resource utilization would exercise on determining the railway route.

First, the location of operations in processing the oil sands is likely to be within a short distance of present rail facilities at McMurray. If rail service could be utilized at all for the









operations the short distances involved would mean little to traffic revenues.

Second, the oil from processing the sands would flow through pipe lines to gathering depots in the south. Thus no railway traffic is generated from the major product produced.

Third, some oil production might be sold for mining operations at Lake Athabasca. As barge service is required to reach these operations, the products would be loaded directly on barges for transport; and in this case I think it is clear that no railway traffic is generated.

It is apparent from the foregoing that major processing and marketing problems have to be overcome before commercial exploitation of the oil sands will commence, and that when these problems are overcome, only minor traffic of an extremely short-haul nature could be generated for the railway.

I think it may be observed in a more general way that the difficulty which presently exists in output of existing wells is well known, and on that account the economic eminence of the development of tar sands is at least in the distance; I think it is not an immediate prospect.

I would like now to turn to the gypsum deposits in the Wood Buffalo Park.

THE CHAIRMAN: The Royalite Company have indicated to us that one of the major products which









they would be producing would be fuel, not the sort of thing that would compete with those products of the oil and gas companies of which we now have a surplus.

MR. BONNER: I only point out that the oil company is not likely to produce fuel, which is a relatively low-cost commodity, at the same time without doing something with the more valuable portions of the field. In other words, you cannot simply go to a source of fossil energy and take the fuel out of it and simply leave the rest in the ground. I doubt very much if the fact that such a thing can be done places them in a superior position to the fuel that is already available in existing fields. I think that is a line of inquiry which might be carefully examined.

The gypsum deposits at Peace Point occur as outcrops along banks of the Peace River. The beds are reported as being approximately 50 feet thick, lying more or less horizontally and containing some millions of tons of usable material. There appears to be little question that these deposits could be of commercial use and provide tonnage movement if:

- (a) The Federal authorities were to reverse their policy of not allowing commercial mining in national parks. The Peace Point deposits are wholly contained within Wood Buffalo Park.

I would note in this connection that the gypsum deposits in Wood Buffalo Park are relatively abundant, and other national parks, some of which are noted here, are in a









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position to supply gypsum needs which, in terms of  
accessibility, do not place the Wood Buffalo Park  
in the forefront of likely development.

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(b) A market of sufficient volume to warrant an economic quarry operation could be developed north of Edmonton. It is estimated that only 20,000 tons of gypsum per annum is consumed by both Inland Cement Co. in Edmonton and by Canada Cement at Clover Bar. This combined demand would scarcely justify commencement of mining operations at Peace Point. Market demands in Alberta, other than these two operations, are adequately met by either Western Gypsum Products Limited, which draws its supplies from Windermere, or from Manitoba. The following quote from a statement issued by Mr. Derek V. Damerall, managing director of Western Gypsum Products Limited, Winnipeg, Man., amply demonstrates the point: --

"It is unlikely that that deposit you refer to at Wood Buffalo National Park would be economic for any gypsum user in Edmonton or Calgary. In any mining or quarry operation volume is one of the prime factors in cost of getting and the other main factor is transport.

The volume the cement companies take in the area of Edmonton would not in my opinion possibly justify operation of a quarry or mine on its own. Even with the most advantageous freight rate it is unlikely that quite









a large operation could possibly compete with the costs that we can put gypsum into either Calgary or Edmonton from Windermere....

"I do not know of any other gypsum user who has any plan to develop in Alberta and even if this should develop, again Windermere will probably be a more economic source of supply."

Current users of gypsum in Alberta have stated that their manufacturing processes have been carefully adjusted to the specifications of the gypsum from the present suppliers, and that they would be loathe to readjust their plant processes to a new gypsum even if certain economic advantages in delivered price per ton were available from other suppliers. They point out that the cost of gypsum is low (\$3 to \$5 per ton), and only a minor adjustment is possible in price for the material itself.

THE CHAIRMAN: How is that calculated?

MR. BONNER: Perhaps Mr. Southworth would answer that.

MR. SOUTHWORTH: The cost is gathered by the Department of Mines in Ottawa which issues a pamphlet each year.

THE CHAIRMAN: Is that the cost as laid down in Edmonton --

MR. SOUTHWORTH: No, the cost to mine gypsum per ton and the cost of transportation is added to this cost. I think to bring gypsum to Edmonton you run in









the neighbourhood of \$10 a ton.

THE CHAIRMAN: At the present time?

MR. SOUTHWORTH: Yes. By varying the price of the gypsum itself you are only dealing with a portion of the total cost.

THE CHAIRMAN: Well, gypsum can be laid down in Edmonton now for from \$13 to \$15 a ton.

MR. SOUTHWORTH: \$13 to \$15?

THE CHAIRMAN: Yes.

MR. SOUTHWORTH: No, I did not hear any figure. I had understood it could be as low as \$10 but it may be \$13 to \$15.

THE CHAIRMAN: I thought you said the freight was \$10?

MR. SOUTHWORTH: No, the total cost. Let us take the maximum: \$5 per ton for transportation and \$5 per ton at the mine would add up to \$10 a ton.

THE CHAIRMAN: Would the gypsum be laid down at Windermere for \$5 a ton?

MR. SOUTHWORTH: No, the cost at the quarry.

THE CHAIRMAN: Well, is the freight rate from Windermere to Edmonton \$5 a ton?

MR. SOUTHWORTH: The freight rates are all public and available and when Mr. Guest comes he can give you the rates to any destination point from any source. This would include Gypsumville in Manitoba and Windermere in the Rockies. If you wish I can file one of these pamphlets which has some of this information









in it.

THE CHAIRMAN: Well, that is fine for now. I was interested in the \$3 to \$5 and that is the cost at the quarry.

MR. SOUTHWORTH: Yes. Again, this does not materially affect the total cost as the transportation is the cost that is difficult to vary.

MR. BONNER: Thus it may be concluded that the current movements of gypsum will remain more or less stabilized, and the likelihood of gypsum being mined at Peace Point is very much open to question. If, however, the material is mined, the tonnages involved are small and the revenues possible from freight movements limited. We were stressing there to go so far afield greater volumes than those presently apparent in the current market would be required.

#### LAKE ATHABASCA URANIUM MINING AREA

The question before the Commission on Lake Athabasca uranium-mining area traffic arises from comments in the MacGregor report: -- "...it appears that the freight to and from Uranium City and adjoining areas on Lake Athabasca will tip the scales in favour of the McMurray route to the extent that the freight in sight on the route from McMurray will be 15 or 20 per cent more than if the railway were to start at Grimshaw."

Even though the current level of freight carried to Lake Athabasca mining areas be maintained









after 1962, which is very much open to question, the amount of freight involved is <sup>in</sup>sufficient to tip the scales in favour of the east route.

THE CHAIRMAN: There is a footnote here referring to the estimated rail traffic at page 24.

MR. BONNER: Yes.

THE CHAIRMAN: As I understand it that is something which you propose should be dealt with when Mr. Guest is here.

MR. BONNER: Yes, I think that would be most useful from the standpoint of the Commission because Mr. Guest has arrived at some conclusions as a result of studies which, I think, he can explain better than anyone else.

The proposed railway would not carry the freight directly to the mining areas, and barge service would still be a requirement to land the freight at its destination.

The proposed east route takes the railway to Peace Point, where the crossing of the Peace River occurs. It is at this location that freight would be transferred to barges rather than at Waterways, where transfer presently takes place.

The advantage to be gained in changing the transfer point is the possibility of deeper water being available on the Peace River during dry spells.

The disadvantages resulting from the relocations are: --

- (1) Close to 150 miles of extra haul for traffic designed for Lake Athabasca mining areas.









The combined rail and barge movements from Waterways is about 423 miles against a 273-mile movement by barge alone from Waterways.

- (2) Increase in rates for freight movements into Lake Athabasca mining areas. Here is another footnote.

THE CHAIRMAN: That is another thing you want us to look into?

MR. BONNER: Yes, I think that should be looked into very carefully. I have had a little experience in these freight rate matters with the Board of Transport Commissioners and discretion has taught me that it is a field in which experts are best consulted rather than opinions gained from experts examined in detail.

- (3) Abandonment of the barge dock, storage and loading facilities at Waterways, currently valued at about \$300,000, and replacement of these facilities at Peace Point.

- (4) The removal of a basic industry from McMurray. It is ironical that the transportation improvements proposed for northern development will actually result in increased freight costs to Lake Athabasca mining communities and to any future development north of Uranium City.

TRAFFIC POSSIBILITIES FROM PRECAMBRIAN SHIELD AREAS  
IN NORTH EASTERN ALBERTA.

I understand the Shield has been well recognised in the deliberations of the Commission because









it is something of frequent reference. However, so long as we stick to facts <sup>it</sup> is unavoidable to mention the Shield.

No Railway Access to Shield and Absence of Known Commercial Ore Deposits.

The proposed east route does not provide for rail service into the Shield area. To reach the Shield from the East Route a long multi-million dollar spur involving a major bridge over the Slave River would have to be built in addition to the East Line. Such a spur would tap only the fringes of the Shield whereas a railway extension from Prince Albert, Saskatchewan, or Lynn Lake, Manitoba, would cut through the heart of the Shield and more logically assist the development of its resources.

While it is known that geological investigations have been undertaken by the Alberta Research Council into the mineralization of North Eastern Alberta, (Here a report is cited for possible further study.) several decades of prospecting in the area have not yet resulted in published reports of the existence of commercial ore bodies. It is outside the scope of this brief to assess the findings in the Alberta Research Council's report or make any claim as to whether or not commercial bodies of ores, may be found. However, it is obvious that until actual mining operations on a commercial scale are undertaken in the area, no rail traffic of any significance will be generated. In









this connection I think it should be further observed that neither the construction of a road nor the provision of a rail connection is necessarily the way to discover commercial ore bodies. I think few discoveries have followed as a direct result of such a thing.

Discoveries are ordinarily made now by helicopter and aircraft magnetometer and by the valuable efforts of prospectors on foot and by canoe. I think when we discuss the chicken and the egg conundrum and talk about commercial ore bodies, it seems to me they have to be found and made known prior to rather than following the rail construction or to be expected to follow rail construction as a matter of logical course.

THE CHAIRMAN: That is the position you are taking. That is the position I think Dr. Riley took yesterday. However, there are some eminent mining men who feel that transportation facilities encourage exploration.

MR. BONNER: Unquestionably it makes prospecting easier but there are any number of instances which could be cited to show that transportation goes to discover situations rather than discovering situations arising from the provision of transportation facilities. The Ungava field and the railway which is being constructed into Ungava is a case in point. Cassiar Asbestos in British Columbia is another. Asbestos in commercial quantities was located at Cassiar, a road which is jointly being built by the Federal and Provincial









Governments follows to make development possible. I think the point I might stress in this connection is that rail facilities encourage development, they do not necessarily encourage exploration. I think the sequence is discovery, lay down access, development; I think that is the ordinary sequence of events.

COMMISSIONER GAINER: Do you think there has been any strong suggestion that the proposed line to the east would, in fact, stimulate exploration as opposed to development? I think these two things must be distinguished.

MR. BONNER: Well, I am certainly interested in the distinction being maintained. I do not think you lay down a railroad for the purpose of exploration, I think exploration is more economically accomplished by prospectors on foot or making your magnetometer survey by aircraft or helicopter. That is the way exploration occurs in these days, it being obvious to the industry that is the best way to go about it. However, once you have discovered mineralization then you have an economic justification for putting in more permanent means of access whether by road or rail. I suggest that is the ordinary sequence of events which pertains to this region as to any other.

If I might just anticipate the next point in this connection, to illustrate what I mean. Exploration has already indicated on the western side the prospects of gas and oil potentialities, in fact the whole geology









of the region suggests that exploration phase is active and its implications are apparent. What is required now to excite development and to permit development is laid down access by means of which heavy machinery and people can take up a region and develop it. That is why I am grateful for <sup>the</sup> distinction Mr. Gainer has made between exploration and development and the relationship between these two distinct phases and transportation itself.

THE CHAIRMAN: When you come to the question of oil and gas which is the next item in your brief, do you not run into the problem you raised a few minutes ago with regard to Royalite's operations. That is, if Royalite provides fully for their plant at Mildred Lake they must find some means of disposing of the surplus that we have now. We face the same kind of surplus wherever there is development of oil and gas including the northern part of Alberta and British Columbia.

MR. BONNER: If I might distinguish between these two situations; the tar sands and the possibility of commercial development of them have been cited as an instance justifying an eastern route, something which is about to take place and on that statement I think a legitimate question could be cast in view of reserves in being elsewhere more commercially available and capable of developments which are more likely to be drawn upon than the tar sands.

Now, the question is raised does not this









observation mitigate against development in northwest Alberta if access is provided up there. My answer to that is this, that the phase through which the northwest part of Alberta and northeast part of British Columbia are passing at this point is a phase of exploration and limited development in the sense of drilling and capping. It is an unforeseen activity on the part of the oil industry which must reach out in its planning a generation or possibly two in providing reserves for the tremendous investment which it has in supplying facilities. Presently the oil and gas industry resources have increased actually over the last 30 or 40 years and this pressure is continuing and will continue without cessation. The oil and gas industry is such that it cannot avoid this continuous operation on its part to secure more reserves to block out its economic path probably further ahead than any other line of commercial activity presently about us. I do not know if I should elaborate on that point further except to add that it is a different type of problem which is always with you.

THE CHAIRMAN: Do you feel that the oil industry has not maintained its reserves and must continue to find commercial mines and cap them if necessary but it is not necessary for the Royalite Company to go ahead with its plan?

MR. BONNER: I suggest it is not not only necessary but perhaps not even likely.

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THE CHAIRMAN: But it is not necessary for the Royalite Company to go ahead with its plant?

MR. BONNER: Yes; and I suggest it is not only not necessary but not even right.

I will try to illustrate my point by our experience in British Columbia. As you know, on the British Columbia side of the Peace River border a tremendous investment is going on in oil and gas discovery. So far as the oil discovery is concerned -- when that became more apparent -- at the moment, at least, there is no means of taking the oil to the market from the B. C. section of the Peace because we haven't got a pipe line. However, that hasn't diminished the exploration phase which is an industry in itself. I would direct your lordship's attention even further, to this region inside the Panhandle -- the Groundhog region -- in which exploration is now starting. In so far as markets are concerned it is in a poorer condition because it lies in the most remote part of our province; and yet, only a few weeks ago, major oil concerns were prompted to expend nearly \$5 million for drilling rights there, which they intend to develop.

THE CHAIRMAN: This is in the northeastern part of British Columbia?

MR. BONNER: The northwest.

COMMISSIONER GAINER: I had a little difficulty, Mr. Bonner, following the argument with respect to the fact that explorations will always be with us.









I should have thought, with this commercial process -- that is, the process working out in the oil sands -- it might, in fact, remove a good deal of the necessity for a lot of exploration with conventional drilling methods. If it has this size of reserve -- and given the engineering feasibility of extracting them -- it would be far more than conventional industry. So that the question is: Isn't this commercial development the equivalent of additional exploration?

MR. BONNER: Well, of course, if that line of argument were taken to its logical conclusion it might have been stated that there was never at any time any need to develop Canadian oil resources at all, because world resources, prior to Canadian development, were more than adequate and have continued to be adequate for current world requirements.

For that matter you might take out the entire North American development and rely on Venezuela and the Middle East.

I don't think the oil industry is prepared at this time to abandon conventional sources of oil even for the immense reserves which are mathematically known to exist in the tar sands.

COMMISSIONER GAINER: I wouldn't argue that, but I wondered how you justified the statement that the oil sands proposition isn't likely to come forward, or isn't necessary. It would be the equivalent of certain types of exploration.









MR. BONNER: Well, there is one observation which, so far, has not been stated, but which, I think, will occur to both of us, and that is that the problem which exists in relation to Alberta fields in particular is that a great deal of gas is being drawn off the Alberta fields, and if you draw the gas off and take no oil and rely on the tar sands it will come to the point where we will lose all the oil. But I don't think that will happen. When we have oil and gas fields we have to take both off. In terms of scientific conservation practice either we lose one or the other for useful processes. The gas commitments that we have to meet in Canada and the gas commitments that we expect to make to the United States, in Alberta and in British Columbia, for that matter, indicate the necessity of continuing to remove oil from the field along with the gas. We have the knowledge that if we don't we must lose one or the other.

COMMISSIONER GAINER: What proportion of total gas would you be speaking of when you say that it must be taken out in association with oil? Surely it would be a rather small proportion?

MR. BONNER: I don't think you can answer that categorically, because it depends on the well and the structure of which you speak.

COMMISSIONER GAINER: But it is not large -- it wouldn't be a large proportion -- looking at the









industry in western Canada as a whole?

MR. BONNER: Well, it goes into trillions of cubic feet, according to the evidence before the Borden Commission and the Federal Power Commissioners in Washington.

I know that so far as West Coast Transmission was concerned in British Columbia they had to show a reserve of two to three trillion cubic feet -- the precise figure escapes me at the moment. The field most seriously affected by the proposition which I indicated is the Turner oilfield in which there was a conservation problem on gas associated with the extraction of oil.

Accepting, primarily, what the conservationists say on this problem you can't afford to shut down the Turner field or you throw half the resources away. That is why gas export is a valuable consideration to this province and a consideration of equal value to eastern Canada.

THE CHAIRMAN: Yes, Mr. Southworth?

MR. SOUTHWORTH: May I say that Dr. Hume is probably the foremost authority on these questions. They are quite involved and intricate. He could make logical answers to the inquiries that could be brought up here.

THE CHAIRMAN: I am sorry, Mr. Southworth, I didn't hear you -- your last statement.

MR. SOUTHWORTH: Well, I would suggest that









he could more logically answer the inquiries that would be brought up by this Commission.

THE CHAIRMAN: Yes; that may be. I hope Mr. Bonner doesn't mind our questioning him.

MR. BONNER: I am grateful for the point, because it is obviously raising a question which is of concern to the Commission, and it is our function to answer those questions.

I think we have to be pretty realistic on this oil/gas business. It is not only of great strategic importance but it has a disproportionate impact on western Canada; and we have to be clear-thinking on tar sands in connection with investment already made.

I know the question was raised to invite an answer. I don't think the tar sands are an alternate to investment in commercial fields. They are something integrated with existing industry and something which will be called upon at some future time. There is, of course, the point that it is somewhat removed from the present.

In the formal portion of the brief, having to do with mineral development in the west region, we have obtained statements of the possibility of gas/oil explorations in northwest Alberta from G. S. Hume. Dr. Hume is a man who is recognized the world over. On this subject that is presently before the Commission, on questions of particular detail I suggest he would be most valuable at a later time.









In summary, Dr. Hume's statements indicate that a complete ring of the oil and gas-bearing Slave Point strata surround the Peace River arch. The discoveries made in this Slave Point strata appear to be the preliminary developments of extensive oil and gas fields in a large region encompassing southern portions of the Northwest Territories, portions of northeastern British Columbia and all the Peace River regions. The major trend of discoveries is in the western and north-western parts of the Peace River area rather than in the eastern part.

This trend to the west must be taken into consideration when planning transportation facilities to the north if facilities to serve growing exploration activities and marketing needs are to be provided.

At this point it is important to note that production of natural gas to any extent in northwestern Alberta will probably result in large quantities of sulphur and hydro-carbon by-products being produced. The hydro-carbon by-products -- mainly propanes and butanes -- are usually moved by railway tank cars, and a demand for these may ultimately be found if rail service is available.

Never before has any industry developed at a faster rate than the petrochemical industry. New discoveries and technological improvements in transportation are providing the impetus for spectacular development. The trend toward large tight container









tanks, which can be carried piggyback on trailer trucks or railway cars and in ships, has made available increasing amounts of light hydro-carbons on an economic basis and their uses for supplanting other raw materials are growing at a rapid rate.

Here we have drawn on a publication, "Petroleum Week," which made this report on petrochemicals on 14th August this year.

Abundant supplies of methane-rich gas, ethylenes, and other hydro-carbon gases in the Peace River District make the region a prime location for chemical-processing plants. If the availability of the means of transportation in the area could be combined with the recent innovations in the methods of transportation, then the development of the present and potential western gas fields would be brought much closer. The region has all the attributes necessary to foster petrochemical development, but the railway to the north is required to complete the picture.

One additional aspect of future development in the mineral industry of the West is the likelihood of ores being reduced electrolytically. The availability of abundant low-cost electric power from Hudson Hope opens up the possibility of exploiting various ore deposits around Great Slave Lake and the Yukon districts. At this time it is difficult to forecast any specific instance, but all the essential elements would be present if the railway came into existence.









THE CHAIRMAN: Before you leave that, Mr. Bonner, would you mind turning back to Dr. Hume's opinions with regard to the trend of discovery where, in the first paragraph, dealing with oil and gas, he says: "The major trend of discoveries is in the western and northwestern part of the Peace River area rather than in the eastern part . . .". When he is speaking of the Peace River area is he referring there to the portion coloured in yellow on the front part of your brief?

MR. BONNER: That is my general understanding, that the Peace River area, or the old Peace River block, has been the area under specific study.

THE CHAIRMAN: That would take it, would it not, some little distance west of the proposed railway route?

MR. BONNER: It might do, although I am instructed that the proposed western route does appear to run through the area under examination.

I might explain here, subject to further observation, that the geography of the region -- which can easily be delineated from other sources, but the position of which I recall from previous studies, suggests that this field runs not only through the area indicated in yellow but runs right into the Territories; and if I recall the article in the "National Geographic" of a number of years ago, the favourable geography for this type of resource appears









to extend to the Arctic Circle, and, possibly, to the Arctic Ocean, and then it sweeps down through Alberta and comes into Saskatchewan in the Great Plains region; so the railway seems to cut through the region which lies in this direction. It would be difficult to say, in respect to the proposed line of the railway, whether it is in the centre or just to one side, but the fact is that when it goes into that region it cannot avoid having a favourable impact upon this exploration phase we were discussing a little while ago.

THE CHAIRMAN: You are referring, now, to the opinions that have been held for a long time as to where the interesting exploration area is?

MR. BONNER: Yes.

THE CHAIRMAN: But Dr. Hume is now referring to something of a little more detailed nature which, he thinks, is interesting in view of the Slave Point strata?

MR. BONNER: I believe Dr. Hume has directed his attention to the oil/gas potential within the region likely to be traversed by the railroad. That is not to say that the region is a co-terminus with it.

THE CHAIRMAN: He has picked out a spot within this interesting oil-prospected area which, he thinks, will be of interest in view of the position of the Slave Point strata?

MR. BONNER: Yes.

THE CHAIRMAN: The Slave Point never produced anything until what -- some years ago?









MR. BONNER: Not long ago. You had catwells there even in 1921 and 1922.

THE CHAIRMAN: Are they in the Slave Point strata?

MR. BONNER: As to the strata, I am not sure.

THE CHAIRMAN: Perhaps we shouldn't bother you about this now.

MR. SOUTHWORTH: May I refer you, Mr. Chairman, to page 17 -- the interpretation of which Commissioner Thompson might be able to help you with at some time?

MR. BONNER: The reference there is, of course, to Dr. Hume's addendum in which the structures within the region under examination are critically analysed.

I hope your geology is greater than mine, in the sense of being readily familiar with these terms.

THE CHAIRMAN: I think not much greater, Mr. Bonner!

MR. BONNER: I was going to digress for just a moment to remind your lordship and Commissioners that I understand the Peace River Power Company has filed a brief with the Commission indicating, as a matter of something to be taken under study, the possibility of electrical energy being made available in large quantities in the vicinity of Hudson Hope, which is not too far off the region we are discussing here.

In that connection I think it would be proper,









further, to advise that the Peace River Power Company now is at a full meeting in London with its directors, examining the detailed engineering on this proposed hydro electric development which has been undertaken during the past year and a half; and the result of the engineering and the possibilities of the situation are, later on, to be reported to my Government.

I am not in a position to indicate anything more formally at this time. I may say, on an informal basis, however, that there appears to be no physical problem encountered in the engineering which would rule out the possibility of large-scale hydro development at Hudson Hope.

THE CHAIRMAN: I understood there was no physical problem in regard to engineering, but the financial element will have to be considered.

MR. BONNER: The problem, in the first place, is the engineering study, without which no financial consideration can be made. The engineering study has indicated feasibility, and the probable cost . . .

THE CHAIRMAN: It is tremendous -- several hundred million dollars, isn't it?

MR. BONNER: Yes, I think it would be.

THE CHAIRMAN: Is that what they are discussing at their meeting -- the engineering feasibility?

MR. BONNER: Yes; but I think -- I am guessing -- but I can't imagine that engineering feasibility would be discussed apart from the economics of it as well.









They go hand in hand. I was indicating engineering feasibility as the likely point of discussion simply to indicate the sequence.

Now we come to the question of forestry development.

There is no question that the East region contains excellent stands of mature timber. Exploitation of these stands would undoubtedly produce revenue for a railway carrying the timber out. Only a small percentage of the mature timber available can be economically exploited, however, and a large portion of the region's resources must therefore be discounted.

The major difficulty arises from soil conditions. The best soils for producing timber are found in valley bottoms, and it is here that the good spruce stands exist. The valley bottoms account for only two per cent or so of the total timbered area, however. The balance of the area consists of muskeg, arid highlands, or soils of a rocky nature.

Such soil conditions produce one or more of the following effects;

- (1) Dominance of a species and size only suitable for pulpwood;
- (2) Slow growth rate limiting annual allowable cut;
- (3) Non-regeneration of desirable species once these are cut;
- (4) Low density of timber per acre;









- (5) Early signs of rot and rapid development of rot conditions;
- (6) Inaccessibility of uneconomic access to merchantable timber.

These effects either do not exist in the West region or have considerably less impact on the economics of exploitation. For example, foresters familiar with the East region estimate that perhaps half of the pulpwood stands are accessible and that as little as one-third of the stands suitable for sawlogs can be reached. Against this almost all the timber areas of the West region are accessible. In addition, density patterns are such that a minimum of 16,000 square miles of forested area would be required to support a pulp mill in the East region against a minimum of 6,000 square miles in the West.

I direct your lordship's attention, and the attention of the Commissioners, to the map which appears between pages 8 and 9, in which the relative density of forest covering is set out in graphic fashion. It is an elementary observation that the lower the density the more ground you have to cover, the more roads you have to build and the more expensive the operation; and, therefore, economically speaking, the denser area is the one to be desired.

The MacGregor Report states:

"In general, the stands of timber are best  
"in the southwest and in the southern parts of









"the area. There is less productive land as  
"one goes north and east, and the amount of  
"timber~~per~~ productive acre decreases towards  
"the north and east as well. This variation  
"is not surprising, as it follows the same  
"general pattern as the suitability of the  
"soil for agriculture . . ."

From the foregoing it is obvious that:

- (1) The area will not produce as much timber wealth as will the West region;
  - (2) Reserves of timber which can be exploited will be exhausted sooner and will regenerate to a lesser degree than those in the West region;
  - (3) The likelihood of industrial development in the form of pulp or plywood mills is small for the East region because of access difficulties, low-volume timber densities, and lack of a local labour supply.
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I am almost tempted to observe here that we possibly shouldn't be talking about the forestry potentialities of the east and west regions in view of our heavy forestry commitments in British Columbia. However, it does go to the point I made earlier, that anything that goes to the development of the Peace River block will go to the benefit of the two provinces.

To examine the west region now.

Approximately 10 million acres of timber stands are tributary to the West Route, containing approximately 480 million cubic feet of saw-timber and peeler logs, and 1,500 million cubic feet of material for pulpwood. Accessibility is possible to almost all areas.

#### Lumbering

Exploitation of mature timber stands is presently being undertaken in areas up to 183 miles north of rail service in Grimshaw. However, lack of rail service into the area is heavily penalizing these operations. The long truck hauls required to move lumber to railhead adds considerably to transportation costs and effectively retards the expansion possible in the industry.

North West Lumber Sales Limited states:

"Our present production represents approximately  
"25,000,000 board feet annually, all of which is  
"hauled a minimum of 100 miles to railhead at  
"Grimshaw and some as far as 183 miles. This  
"puts these operations at a great disadvantage









"on today's very competitive lumber market. It  
"should be noted that this production is all  
"Western White Spruce and a minimum of 60 per  
"cent is exported to the Eastern United States.  
"The balance is sold mainly in Eastern Canada.

"Truck competition along the Mackenzie  
"Highway would not be a factor in the lumber  
"industry . . . boxcars are the only economic  
"means available for the long haul to Eastern  
"markets."

At the risk of making an observation well understood, the problem here is one of handling costs; if you have to handle to truck and to boxcar to reach your markets, that is another cost which has to be met. It is better to put it once in a freight car and send it to its ultimate destination which puts it closer to competition in the region.

THE CHAIRMAN: Mr. Bonner, you were speaking about the railway. That has led to increased activity. Do you know offhand how much increase it has been per year?

MR. BONNER: I could mention that in the first quarter of this year our lumber haulage was 75 per cent greater than it was a year ago. Perhaps Mr. Roethel can give me that data from his voluminous notes.

THE CHAIRMAN: How many million cord feet have come from that area?









MR. BONNER: Forty-eight per cent of the province's total output comes from interior lumber, that is off the coastal range. From the Peace River district of British Columbia we have 3600 carloads as our estimated production, and I would draw your attention in this connection to page 35 of the brief. In this addendum at page 34 ---

THE CHAIRMAN: In 1958 the lumber production following completion of the P.G.E. was 14 million cubic feet?

MR. BONNER: Yes.

THE CHAIRMAN: That is less than what is north of Grimshaw now?

MR. BONNER: That is right. The railway has just been in one year in its operation in that region.

THE CHAIRMAN: How many million feet is 3500 carloads?

MR. ROETHEL: Fourteen million cubic feet.

THE CHAIRMAN: Approximately 150 million board feet?

MR. ROETHEL: No, 14 times 6. Our conversion factor is times 6.

THE CHAIRMAN: I thought a board foot was an inch.

MR. ROETHEL: Yes, but not in a practical way. To include waste you have to take a conversion factor of 6. For a matter of convenient conversion,









I would say 6 is a very common factor to convert board feet to cubic feet.

THE CHAIRMAN: The 3500 carloads is how many cubic feet?

MR. ROETHEL: Fourteen million cubic feet. It is times 6 if you want it in board feet.

COMMISSIONER GAINER: Mr. Bonner, just as a matter of interest to us, where would the major proportion of production in the Peace River area, as far down as Prince George, be marketed?

MR. BONNER: In eastern United States, primarily.

COMMISSIONER GAINER: By boat?

MR. BONNER: No, it comes down by railway and is barged to American connections. Our main market now appears to be in the eastern seaboard.

COMMISSIONER GAINER: And that would apply to both fir and spruce?

MR. BONNER: Yes.

"The present railway tariff shows a  
"freight rate of \$1.47 per cwt. on lumber  
"to the New York area. This rate is the same  
"from Edmonton, Grande Prairie, Dawson Creek,  
"Grimshaw, Waterways, Prince George, Prince  
"Rupert, etc. Hence the operation would effect  
"a considerable saving in trucking charges (if  
"rail service was available), and the railways  
"would receive the benefit of the long haul to









"the East Coast market."

North West Lumber Sales Limited, one of three major firms operating in northwestern Alberta, has approximately \$1,000,000 invested in timber deposits and plant equipment. They have the following to say on expansion possibilities:

"It should be noted that existing plant facilities already in operation along the proposed west route are capable of handling a much greater volume (at least double) without any major capital expenditure. However, tremendous capital investment would be available for development of the area should the railway go in."

As the survey of timber stands in the area shows, a 400 per cent expansion in output is possible on a sustained yield basis. This output could generate 240,000 tons of freight per annum for the west route.

Expansion of logging operations into the Northwest Territories is also possible. Commercial stands of excellent timber extend well into Mackenzie Valley and beyond. Sawlogs could be trucked to railway sidings over existing highways. Sidings at the most northerly junction of rail and highway would permit operations up to the vicinity of Fort Providence. Without the west route the stands will remain useless and fail to produce the industrial development in the Territories which they are capable of generating.









THE CHAIRMAN: Can you tell us something about the feasibility of bringing lumber from that far north?

MR. BONNER: I think it would require a very favourable freight rate when you get to the northern limit of that territory to make that region competitive with the south.

THE CHAIRMAN: How far north do you think the industry can go if the railroad is put in?

MR. BONNER: We know it is already 183 miles north of Grimshaw. Mr. Collins, who operates in that region, is here and I am instructed he has special views on this matter which may be cited at this point if an opinion were sought. Could I ask Mr. Collins if he would make an observation?

THE CHAIRMAN: Yes, we would be delighted to hear from him.

MR. BONNER: I believe the question, Mr. Collins, is how far north of Grimshaw would rail permit operation of lumber stands to occur?

MR. COLLINS: In answering this question I would say this, that we have an operation presently at 183 miles north. We also have another operation that is within 107 miles of the Great Slave Lake. However, by virtue of the fact that there is no rail transportation, the production in this area must go north.

THE CHAIRMAN: This is the one 183 miles north?









MR. COLLINS: No. The production there, which is actually High Level -- we have the alternative of either going there, a very long truck haul to Grimshaw or to ---

THE CHAIRMAN: How far is that from Slave Lake?

MR. COLLINS: About 200. However, we have a location at Steine River which is 107 miles from Great Slave Lake, and by virtue of the long truck haul to Grimshaw it eliminates any production coming south; it goes north. By virtue of there being no railroad the production is limited to what we can sell in the north country, and that is a very varying factor from year to year.

COMMISSIONER GAINER: Would you expect, if the railway went to the north anywhere, say, Hay River, that you could move it out at the same total cost as you would to Grimshaw?

MR. COLLINS: Well, by virtue of our markets we would be able to move it out at a lower cost, because where we are selling, the United States, you have the flat rate. We ship to Prince George for the same rate as to Grimshaw, Edmonton, and so on, and our freight rate structure in Canada is such that once you go to High Prairie north you cannot sell in the south, so therefore the rail would be a good connection.

THE CHAIRMAN: It would be assuming the freight rate remained the same?

MR. COLLINS: Yes, and the freight rate for









the American shipments is an agreed charge.

THE CHAIRMAN: I am wondering about that question and how it would affect the building of this new railway. If there is enough lumber now available close to railways, if it must charge the same freight rate to haul an extra 300 miles over a railway, that is the difficulty.

MR. COLLINS: I couldn't explain this portion of it, but I think they share in that overall rate of \$1.47 and it is shared pro rata to their haul. Obviously it must be distributed in some manner to the railway concerned, and the whole freight rate is on the basis that they can haul for \$1.47 to the large producers in the United States, and therefore we are competing with that in order that our products can be sold at a competitive price.

THE CHAIRMAN: You don't feel it is feasible to carry on any operations if the rate is higher than \$1.47?

MR. COLLINS: Well, it depends on the operation; but there is a point of no return, and, for instance, in our operation in northern Alberta you are almost at the point of no return when you have to truck 183 miles.

THE CHAIRMAN: You can truck 183 miles?

MR. COLLINS: On a dry market in the summer we can; on a green market in the winter time we can't.

THE CHAIRMAN: So would this be correct, that









you could go as far north to take lumber out as the railway will permit you to do so, providing their rates are the same for the 183 miles?

MR. COLLINS: Well, you would have to assume that. I don't think it is as easy a solution as that. The production that we have now at High Level -- I would say 50 per cent goes south and 50 per cent goes north. Now, the return on the stock going north is much greater than the return on the stock going south, and the combined picture results in a profitable operation; but if you were to eliminate the product going north and cut your production, I would say it is not a profitable operation now going south. You need the production to cut your fixed costs, your depreciation, capital investment and insurance. You need that additional protection.

THE CHAIRMAN: Mr. Collins, Mr. Bonner has referred to timber in the Mackenzie Valley, and I presume you are referring to the area west on the shaded portion north of the Great Slave Lake?

MR. BONNER: That is correct.









THE CHAIRMAN:    Going on up to the valley of the Liard River?

MR. BONNER:    Yes.

THE CHAIRMAN:    Do you see any prospect of that being economical, Mr. Collins?

MR. COLLINS:    That would depend on the freight rate.

THE CHAIRMAN:    Well, do you think there is a chance of the freight rate being low?

MR. COLLINS:    If you had your competitive American freight rate, it would.    Also, with the railroad I imagine there would be a terrific development of the north country and you would have a much greater production going north than you have now.

COMMISSIONER GAINER:    I suppose one effect that I have often wondered about both in timbering and farming is that if the railroad alone were to extend to the lake you may very well find -- I can see how it might affect the economies of your present operation but you cannot very well find it worth while to go 100 miles beyond the railroad and truck in 150 miles and so on.

MR. COLLINS:    That is exactly so.    In other words, you can open up areas you cannot even touch now.    It is just a geographic situation.    If you tell anyone in northern British Columbia that we were trucking 183 miles to the railhead they would think you are crazy because up there if we truck 60 miles they think it









is a long haul. However, there are other factors because we have cheaper labour and so forth in this Province, we manage to compete but it is a tougher proposition and once again, it is directly dictated by mileage and your costs. In this particular instance a railroad would be a tremendous aid to the lumber industry and the development of it in that area.

COMMISSIONER GAINER: I think we would be right in assuming, would we not, that the benefit, given the structure freight rates, the benefit would accrue to the operators in this case although it is something you will have to put to the railroads. It is a little difficult to understand what the interest of the railroads would be in extending the line if there is no additional revenue accruing.

MR. COLLINS: I would like to answer that this way: There is considerable additional revenue. There would be the volume moving out which would be hauled by the Canadian Pacific Railway or the Canadian National Railway to eastern points and that is a very valuable item as far as they are concerned. I think it has been pointed out here that the tremendous increase in volume over the PGE as a result of opening the area, 3,500 cars and those are all hauled to the eastern United States or at least, a good part of them.

COMMISSIONER GAINER: This would only apply to the extent your operations increased as a result of the railroad going in?









MR. COLLINS: Well, the operation of all the people in the area.

COMMISSIONER GAINER: It would not apply to the volume which you are now trucking into Grimshaw and shipping?

MR. COLLINS: No, that is true. Another important factor to be considered which would be an indirect result is that we would be able to produce lumber and sell it cheaper in the north country not only because we would be located closer geographically, but you have not your trucking service south which you need.

THE CHAIRMAN: Mr. Collins, are you sure it would be more hauling for the Canadian Pacific and the Canadian National Railways? Is there a chance it would mean more lumber coming from the far north but perhaps a corresponding amount less from old parts of Alberta or British Columbia?

MR. COLLINS: No, I think you would just increase the overall production in the Province. Conversely, this is something that the forestry people would have to answer, the situation in the Province now is that you are going further and further back to get your timber. There are areas that are completely cut out. For instance, our operations on High Level have come from the Edson district which is where the pulp situation is and they ran out of timber there, went north, and they found they have good timber stands and they are hoping very much they can have the railway in for a reasonable









operation.

THE CHAIRMAN: Are you getting short of timber in Alberta?

MR. COLLINS: We are getting short, but we can market at a profit.

THE CHAIRMAN: How has the PGE worked out in British Columbia? Has that meant that as you increased the sale of lumber from the interior part of British Columbia that it has not altered the market from the rest of the Province?

MR. BONNER: This is a basic fact: The premise is not one of a static market but an expanding one and we are talking insofar as north American requirements are concerned in billions of cubic feet and in these areas we are considering millions. Our participation in the whole picture in any given region is through the fact that the market expands so vastly in its total requirement means that with great gratification the output is greater each year than the preceding year. We are in what the geneticists call a population explosion in North America in which the foreseeable future of family units are such that while in Canada alone we are going to double our population in the next 20 years, the population of the United States will reach one billion people in the next 20 years and the requirements of housing is almost astronomical.

THE CHAIRMAN: As the industry has developed along the PGE it does not mean it has taken anything from









any other part?

MR. BONNER: No, the coastal cut is up and the interior cut is up. What has occurred is that the cut in the interior has risen in proportion in that, in the interior regions the interior used to be 15 per cent to 20 per cent of our total output, a matter of 6 or 7 years ago. Now, it is 48 per cent as against 52 per cent in a larger output in the whole Province. That becomes all the more important if your basic forestry policy is one of sustained yield which I presume is the same as in our Province and elsewhere in the country. The pressure of the expanding market has to require broader markets of forestry upon which to draw. You do not cut and get out of any region, you cut in a fashion in which regeneration is assured. On that account you need broader acreages upon which to base your industry than under the old piracy system of firing the forests rather than maintaining them. That is an inexorable pressure on the necessity for providing access into your forestry resources which will be encountered here sooner or later and that is why I suggest this is of importance to the forestry industry in this Province.

I would only assume further to Mr. Collin's submission that in the nature of things I believe the agreed charge would have to be part of the picture of the new rail line just as it is in the line which runs over to Prince Rupert. With all the complexities of rail freight financing the necessity for maintaining









regions in competition with American haulage has nevertheless been recognised. I cannot really imagine a situation in which the northern haul would be at a greater rate than the agreed charge from Grimshaw west. That is a point, of course, which can be explored. It may be when I have had an opportunity to refer more fully to some material just put before me that I can expand upon this point, but I cannot do so at the moment.

THE CHAIRMAN: Would you like a short adjournment?

MR. BONNER: Yes, thank you very much.

THE CHAIRMAN: Very well, we will have a short recess.

--- A short recess.









THE CHAIRMAN: Are you ready, Mr. Bonner?

MR. BONNER: Yes, thank you.

THE CHAIRMAN: I think you have a judgment of the Board of Transport Commissioners?

MR. BONNER: Yes. The point at which I broke off was the point at which the recent judgment of the Board of Transport Commissioners was drawn to my attention. It is dated September 15th, and on that account I hadn't been familiar with its contents. In regard to the general water rates investigation discussed under the said Order in Council, a great number of items were found and filed. I will file this with the Commission if it is your wish.

However, the point to which we were directing our attention involved freight rates structure and what might be the case in respect of the northern lines.

It is rather a lengthy paragraph, but I will read it to you because I think it summarises the philosophy of the whole matter:

"The basic factor in the rate structure from British Columbia is the competition of American railways which transport lumber from the States of Washington and Oregon to destinations in the eastern United States at low rates to compete with steamship service via the Panama Canal. For many years this basic factor has influenced the









Canadian freight rate structure on lumber from British Columbia and Alberta origins to eastern Canada. As early as 1921 the rate from Vancouver to Toronto was set at the same rate as applicable from Seattle to Buffalo and the rate from Vancouver to Montreal was set the same as from Seattle to New York and Boston, and this parity of rate relationship continued until 1938. From that year until 1951 due to rate increases under various ex parte decisions of the Inter-state Commerce Commission and Canadian Freight Rate increases authorized by this Board the rate parity mentioned was destroyed. In 1951 the rates from the United States coast to the markets in Montreal and Toronto were lower than the comparative rates from Canadian coast points to the same markets. Following negotiations between the B.C. lumber interests and the railways, the railways voluntarily undertook to reduce the rates from the B.C. coast to the same level prevailing from Seattle, Washington, to eastern Canadian destinations. Also, adjustments were made in the rate applicable from interior British Columbia and Alberta shipping points, the rates therefrom varying









only in respect of their differential relationship with the coast rates; this interior rate adjustment being made due to a similar pattern of rates prevailing from interior shipping points in the United States."

It is on that account that Mr. Collins is able to advise that rates from Grimshaw to eastern Canada are the same as those -- I believe he said -- from Prince Rupert; and I believe that is the philosophy of the Board on the rate structure in western Canada which could be anticipated to occur in regard to a northern extension into this region we are discussing.

I believe it is correct to observe, too, that in the long haul operation which would be available from any point north of Grimshaw on such a new railroad, the benefit would certainly be that of Canadian railways which cross the continent, because the destination of the lumber from such points would, in the majority, be the eastern markets; the closer market, sometimes, being competitive -- however paradoxical that may be. That is just one of the peculiarities of our freight structure.

We found a year ago, when we had counsel working with this problem, that we could ship apples, for example, into the States south of Manitoba and have them shipped back from Manitoba into Winnipeg cheaper than we could put them into Winnipeg in the first









instance. So there is no accounting for the peculiarities in freight structure, which occur from time to time.

THE CHAIRMAN: You are assuming that if the railroad is built north from Grimshaw at the point where Mr. Collins is now operating they will have a freight rate that is the same as the Grimshaw rate?

MR. BONNER: I think that would be a correct inference from the prevailing factors.

THE CHAIRMAN: So it will mean a saving in the operation of the present trucking...

MR. BONNER: That is the conclusion which, I think, is correct here.

THE CHAIRMAN: Mr. Southworth, have you something to add?

MR. SOUTHWORTH: It also means extension of industry into the northwest of Alberta. That is implied. If you overcome the truck cost you can then extend it much further from the railway. Every time the railway moves the whole operation moves with it.

THE CHAIRMAN: Yes; in other words, it would be just as cheap to operate 183 miles north of High Level, so far as transportation costs are concerned, as it is now to operate at High Level assuming that the water rate is set as Mr. Collins suggests it will be.

MR. BONNER: Yes. You detract from the possibility of absolute comparison of the cost of road-









ways which may be necessary into the regions adjoining the railroad, from which oil is tapped. The railway origin is over an existing public route which didn't require considerable cost to the operator, but if it is going to go over a newly provided route that causes a continual operational expense, relatively speaking, that is correct.

COMMISSIONER GAINER: I was going to ask this: So far as the freight rates we have been discussing here are concerned is there anything in your evidence, Mr. Bonner, that would not apply to the eastern route in the same way as, I think, we have had evidence relative to the western route?

MR. BONNER: The situation so far as an operator on the eastern side is concerned is not comparable in any degree with the western operation; and the key to that probability lies in the relative density of forest cover. You can log, so to speak, in a 40-mile radius in the western zone and, with the same capital cost, probably have 50 or 60 per cent more timber within the radius of that operation than in the eastern zone. If you have fixed capital cost in either region and effectiveness with an extraction process, it is less in the east than in the west; and, therefore, the cost of extraction is higher.

COMMISSIONER GAINER: This would hinge on merchantable timber density and not on the fact that the freight rate from Peace Point to eastern Canada and the









United States would be any different than from Waterways, let us say?

MR. BONNER: Well, assuming that is so, it nevertheless reinforces the submission in favour of the western route to the extent that the western route is more economic because of density. We have got off on the question of freight rates as a matter of public interest, as to what the situation might be.

COMMISSIONER GAINER: It is on that question that I wanted to be clear.

MR. BONNER: Yes.

COMMISSIONER GAINER: That, so far as freight rates...

MR. BONNER: Assuming that philosophy would apply I would be less certain on the east because of the possible zoning element in the east.

COMMISSIONER GAINER: Except, I think, that Waterways is included in the same group of shipping points mentioned earlier.

MR. BONNER: Very likely. Assuming for the moment that that is a correct observation -- which, I don't think, is too relevant to the point I am trying to make -- the same operating railroad in the west is more economic and much more likely to be a success by reason of the forest density than the railroad on the east, the alternative one under consideration.

Another point I wanted to make mention of was that of the expanding market. In this instance I









draw, of course, on our own experience, although, I think, it will be found to be true of Alberta's experience as well.

In referring to export of wood to various markets in 1939 our dollar volume was \$57,924,968 -- we will say \$57,900,000. That was our total export in 1939.

THE CHAIRMAN: In 1939.

MR. BONNER: That is right. In 1952, however, it was almost 6 times as great -- \$291,400,000; and the 1957 figure, which is the latest established figure -- I don't use any estimate -- is \$373,000,000; and the relative significance of 1952 and 1957 is that the 1957 prices were lower, if anything, than 1952, which shows an increased volume quite in addition to the increased dollar value in the export picture. So I am reinforcing my premise that we are not dealing with a static but with an expanding market.

THE CHAIRMAN: Does it appear that in 1958 and 1959 there has been a further increase?

MR. BONNER: Yes, I would say so. 1958 would possibly be on a par with 1959 -- no; 1958 would possibly be on a par with 1957, but the 1959 figure was absolutely buoyant insofar as lumber production was concerned.

THE CHAIRMAN: It has gone up again?

MR. BONNER: Yes; and our cost on cut was at a peak and our prices were not at their highest but









at a good level. In fact, our total labour income promised to make a two hundred million dollar increase in 1959 over 1958 based on the first 6 months of this year; so it was in great part accounted for by our lumber industry and those things which are dependent upon it.

THE CHAIRMAN: I would like to go back, if you wouldn't mind, to these figures on page 34. At the bottom of page 34 of your brief, it is indicated that in 1958 your lumber production following completion of the railway was fourteen million cubic feet, which I take it, is 84,000,000 board feet?

MR. BONNER: Yes, I think that is the factor -- times 6.

THE CHAIRMAN: 6 times...?

MR. BONNER: 6 times 14,000,000.

THE CHAIRMAN: That is 84,000,000 board feet. Now, that was the shipment from the area which is around the PGE, was it?

MR. BONNER: Yes, shifted by the PGE.

THE CHAIRMAN: Then, in 1958 and 1959 it has gone up to approximately 6 times that from 3,500 car loads?

MR. BONNER: No; the 3,500 cars per year is the potential of the area if the annual allowable cut is sufficiently realised.

We have done two things in British Columbia. We have got a sustained yield factor in relation to each logging area, but if the output is too rapid the maximum









is computed; and, unfortunately for people who aren't involved in our problems, we have converted it all into cubic feet, which is occasioned by our royalty set up. There has been quite a bit of overrun on the board feet, with a consequent loss to the public treasury.

THE CHAIRMAN: Are you able to talk in terms of board feet?

MR. BONNER: Yes.

THE CHAIRMAN: We are novices in the lumber business.

MR. BONNER: Fortunately, I have an expert with me today.

THE CHAIRMAN: This is in 1958. Can you tell me what it was prior to the completion of the railway?

MR. BONNER: Mr. Roethel?

MR. ROETHEL: I don't have it with me.

THE CHAIRMAN: Do you know approximately what it was?

MR. ROETHEL: It started to increase, I would say, already in 1956. I didn't include in these calculations the trucking to Prince George; and in Peace River area they are getting a few samples coming in. It is hard to estimate how many saw mills came in just at the exact moment. I would say gradually while the railway was being built.

THE CHAIRMAN: Was it at the time the decision was made that you were going to build the railway?









MR. BONNER: The railway was several years under consideration. This arose during 1954 and 1955, and I would say that coincided with a tremendous flush of activity in the lumber business during which there was emphasis on the waste of trans-shipments into the interior points.

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THE CHAIRMAN: Now, this 84 million, that is the interior?

MR. BONNER: Just the little Peace River block.

THE CHAIRMAN: This is the Peace River block, or is this the area along the extension of the railroad?

MR. SOUTHWORTH: Facing page 9, Mr. Commissioner.

MR. BONNER: The area indicated on the map between pages 8 and 9 as the very darkest of the three areas shaded, and it is from this area that we speak of the cut of 84 million board feet.

COMMISSIONER GAINER: And that would be the same area as that of the 15,000 allowable cut?

MR. BONNER: Yes; about a quarter of the allowable cut is now being taken out in that region, and that is, without being precise about it, a recent development in our province.

MR. RILEY: Is that not the area at page 32?

MR. SOUTHWORTH: Yes, that is the area.

MR. RILEY: It is the same area you are speaking about?

MR. SOUTHWORTH: Yes.

THE CHAIRMAN: It is described at page 32?

MR. BONNER: Yes. I am afraid with the arithmetic the addendum of the forest appraisal is not immediately easy to follow; at least that is my immediate reaction to it, but with a bit of an evening on it it does begin to round out to a picture.

THE CHAIRMAN: It would appear that there would









appear to be another 300 million board feet per year that could be taken out of that Peace River area, and that is already serviced by highways and railways?

MR. BONNER: Yes.

THE CHAIRMAN: It is serviced by railway, isn't it?

MR. BONNER: Yes.

THE CHAIRMAN: Is it the same kind of lumber as you get from the Alberta area?

MR. ROETHEL: Somewhat better. It is a little more south, that species, and the volume will be about the same. You could compare it with the rest.

THE CHAIRMAN: Mr. Bonner, from an overall national point of view, what would you say to this, that the railway going north into Great Slave Lake is a costly venture, \$60 million, at least, isn't it?

MR. BONNER: Yes, I think it might be in that order. In computing costs, some of the northern experiences have gone to \$220,000, \$225,000 a mile.

MR. FOUKS: \$60,800,000 on the Grimshaw route and \$62,500,000 on the Waterways route.

THE CHAIRMAN: That is the railways' estimate?

MR. FOUKS: Yes, and, mind you, only a preliminary reconnaissance and 1957 quotes.

THE CHAIRMAN: So far the only evidence we have about the increase that would follow from this railroad is something about 30 million a year. Do









you think that is too small? I wonder if Mr. Collins could help us on that?

MR. COLLINS: Yes. The question was asked of me what our production would increase, and I think I said that it would at least double, that there would be many new people move into the area and it was hard to say just what the increase would be. I think that is true of what happened in the P.G.E., people move in all the time and it is increasing all the time, and I think the same situation would prevail in northern Alberta.

THE CHAIRMAN: What do you think it might come to, Mr. Collins? The production is now 30 million per year, isn't it?

MR. COLLINS: Roughly in the neighbourhood of 25 million to 30 million a year. That is just our own.

THE CHAIRMAN: North of Grimshaw?

MR. COLLINS: That is right.

MR. BONNER: I was going to make an observation to assist the Commission's thinking on this point. If you are trying to equate railroad costs to anticipated lumber production just as one of the many factors involved, I think it may be difficult to do this and keep sight of the larger picture which is being served by the railroad construction at all. I would assert that a railroad and transportation facilities are essentially instruments of national development. Certainly that was the case when Canada became









a nation and I suggest it is a factor which looms very large in consideration of what is involved here. I know that is not a point at which anyone will argue. But take the Township of Aklavik. I don't know really the dollar contribution of Aklavik to Canada; I am prepared to admit it is an essential part of the country. We have spent millions of dollars in moving it from point A to point B. In that consideration in high policy I am not certain we can reconcile the dollar and cent consideration; we can only try and put a railway in terms where it will do most good for people and in opening up the country, and I advance that view with the greatest respect because I don't think you can always compute dollar returns immediately in a venture of this sort and of this magnitude. Certainly it wasn't so with the C.N.R. and it wasn't possible with the extension of the P.G.E.

THE CHAIRMAN: Mr. Bonner, I hope I didn't give you the impression that it seemed to me that a decision as to which railway is built depends on the lumber industry. Certainly it would appear that lumber is only a factor, but we may have a problem where we have to weigh the various factors, and just in case we run into the position of weighing things, I would like to know something more about the lumber situation.

MR. BONNER: I was only trying to place alongside it what I believe in my personal opinion to









be the larger factor which sort of supervenes the particular one which we have to take into account. I hope in the long run it will assist the larger picture.

THE CHAIRMAN: Do you mind if we pursue it a little further?

MR. BONNER: Certainly not.

THE CHAIRMAN: Let's come back to this question of the P.G.E. There is room for an increase of something like 300 million board feet per year. Can you give me any estimate as to when you think that might be reached?

MR. BONNER: Our notions in this connection are set out on page 35 in which the carload projections are set forth here as amounting to a 75 per cent increase on current estimated production by 1970. We are fortified in the views which are expressed here by the fact that these views were preceded by general deliberate studies in connection with the Gordon Commission several years ago, and much of this material where projections are involved was worked out for that earlier occasion, and, if possible, we have varied that in view of more mature thinking, but I think in no instance has there been any basic change since that time.

THE CHAIRMAN: You have the annual allowable cut of saw timber in cubic feet: in the Peace River district, 47; the number of carloads, 15,000. Now, that is the allowable, isn't it?









MR. BONNER: That is the correct.

THE CHAIRMAN: You haven't suggested there when you think that allowable will be reached, have you?

MR. BONNER: The reaching point of the allowable is not referred to, but you will notice the estimated production for 1970 is that we think it will go at least two and a half times from that period, and we have attempted to do the same for the west and east routes in respect of blocks 1 and 2 for Alberta.

THE CHAIRMAN: Where are blocks 1 and 2?

MR. BONNER: Page 35. The blocks to which reference is made are to be found on page 30 itself, and the table and the blocks might be referred to in conjunction with one another.

THE CHAIRMAN: What percentage of the total British Columbia production comes from this Peace River block?

MR. BONNER: I think not more than ten per cent currently.

THE CHAIRMAN: Mr. Collins, have you a copy of Mr. Bonner's brief? Do you concur in that estimate on page 35?

MR. COLLINS: Actually, your lordship, I haven't had a chance to study this table. I wasn't involved in the computation whatsoever, and it is based, I think, on their experience in other reports, and my only interpretation is what is happening now and what would happen in the future along the west route.









THE CHAIRMAN: Do you know what the total production is along the west route?

MR. COLLINS: I would estimate it in the neighbourhood of 40 million board feet. In Alberta we use board feet, although they are converting us to cubic feet slowly.

THE CHAIRMAN: The total production in Alberta now in that area you think is 40 million?

MR. COLLINS: I would say roughly that would be the maximum production at the present time.

THE CHAIRMAN: The figure we were talking about in Peace River was 30, wasn't it, Mr. Baldwin?

MR. BALDWIN: Thirty million. I was using the peculiar Baldwin computation. I may be wrong.

MR. COLLINS: For instance, it varies from year to year. I know our largest mill burned up in February, 1958, and that affects your actual production considerably.

THE CHAIRMAN: What do you think that might increase to if the railway were built on up to the south shore of Slave Lake and if the freight rates were the same?

MR. COLLINS: I would say it would increase the potential volume, and I would say that our own production would only be governed by the amount of timber we have under our own control. It is a new area and it would be a long-range programme for us, whereas now our programme is restricted.









THE CHAIRMAN: It is restricted because of costs?

MR. COLLINS: Yes, and as long as you are able to compete you will be in a position to produce.

THE CHAIRMAN: How much would you expect to increase your production?

MR. COLLINS: Our increase would only be restricted by our finances. In other words, our operation would continue to expand on a planned programme in the area.

THE CHAIRMAN: Other people are likely to come in?

MR. COLLINS: That is right; competition will come in for sure.

THE CHAIRMAN: Can you give us any estimate?

MR. COLLINS: I said that with our existing facilities now we could double our production, and the other would just be a part of long-range planning.

THE CHAIRMAN: That, you think, could be anything? Up to what? Would you name an outside figure, something that you may reasonably hope for, to expect?

MR. COLLINS: I would just say that we are also a young growing company and we would want to grow with the area. I wouldn't want to pin myself to specific figures because I honestly don't know.

MR. BONNER: My lord, you directed a question to me which I didn't answer directly about the board feet. It was 14 times 6, 84 million board feet. I









think we were talking about whether it was 30 or 40.  
It is really 84.

THE CHAIRMAN: Well, I have no further questions.

COMMISSIONER GAINER: Just for future reference, could you give us the source, Mr. Bonner, of your information in column 4 on that table on page 35?

MR. BONNER: The estimates are laid out for current production.

COMMISSIONER GAINER: Are these based on actual government figures?

MR. BONNER: That is an estimation of current production which I am advised was obtained from the lumber people in the region.

COMMISSIONER GAINER: Individually?

MR. BONNER: Yes.

COMMISSIONER GAINER: There would be no published source of figures?

MR. BONNER: No, I don't think so. It should be a matter of record within the Forestry Department of British Columbia -- that is when the year is completed.

THE CHAIRMAN: Well, you can go back to your brief now, Mr. Bonner. You were at the top of page 11.

MR. BONNER: Referring to plywood, it is our opinion that the present plywood operations in Grande Prairie would benefit from a railway north of Grimshaw in the same manner and to the same relative degree as the lumbermill operations. Peelers from









sawlog cuttings would become available to the plywood manufacturing plant in Grande Prairie in increased quantities and at low prices. With this in mind, the plant operators are prepared to expand their plant once rail service is assured. That conclusion is based on the interview by researchers with the operators concerned.

Now we come to the question of pulp mill.

Expenditures to the extent of \$250,000 have been incurred in studies made to determine the feasibility of a pulp mill in Peace River. It was fully established that sufficient supplies of spruce and lodgepole pine exist within reasonable gathering distance for support of a 600- to 800-ton per day operation on a sustained yield basis. Our advice is that such a mill would probably start on a 450-ton-per-day basis.

A site in reach of the required timber supplies and with adequate water available was found some distance north of Grimshaw. A rail connection would be required for development of this site, however, as the finished product from the mill would have to be loaded directly into freight cars. It is not possible to truck an output of 450 tons per day or more to railhead and meet competitive prices from other sources of supply.

The plant site north of Grimshaw is stated as being desirable for development within the next









five years or so. Once in operation, approximately eleven carloads per day of finished product would be shipped out. In all likelihood the plant would produce sulphate pulp, and it is possible that some of the output would go to Edmonton for processing into cardboard containers. The pulp mill itself would require approximately 200 tons of chemicals per day from Edmonton (chlorine and salt cake if sulphate is produced). Again, railway service to the pulp mill site is a requirement for this movement.

A pulp mill operating 300 days per year would generate 200,000 tons of freight for the western route.

In this connection, although I think perhaps this might not be the appropriate time to read it, it being more in the nature of an addendum, I would advise your lordship and Commissioners that we have a statement of Mr. McNab, president of the Alberta West Forest Products Corporation Limited, Edmonton, in which he examined the timber situation in the Province of Alberta as regards mainly the construction of pulp and paper mills in this region, and I am in your lordship's hands as to what should be done at this time. Would it be preferable to have it read now to complete the picture?

THE CHAIRMAN: I think so, yes. Does he deal with the possibility of a pulp mill in the McMurray area?

MR. BONNER: I would like to make certain that









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your lordship has copies of this statement.

THE CHAIRMAN: Thank you.









I am sorry that this was not included in our original brief but the statement was not at hand. Would it be your wish to rise at this point to give yourselves an opportunity to read this statement and go on after lunch?

THE CHAIRMAN: We would be glad to have you read it.

MR. BONNER: Very well. This is addressed to our counsel Mr. Fouks, and reads as follows:

"At your request I am relating to you our findings on the timber situation in the Province of Alberta as regards mainly the possible construction of pulp and/or paper mills in this Province of Alberta.

"You will please understand that what you receive will be a summary of our conclusions and the details backing up said summary will have to be omitted as I have not now the time to outline and include these details. Unfortunately, as you know, my report to you, sent in the month of August, was mislaid.

"As you know, I am the President of Alberta West Forest Products Corporation Ltd. and also, on a professional basis, have had connections with the Alberta Pulp Mills Limited and the Grande Prairie Pulp Limited. In addition, I was Resident Woodlands Manager for the North Western Pulp & Power Ltd. pulp mill at Hinton where I was









responsible for the procurement and supply of all pulpwood which the mill required for their operation, also to open up an absolutely new area as far as operation and production was concerned.

"In other words, I believe that through studies of the forest cover in this province, and from the studies that I have been connected with as regards feasibility of pulp and paper mills in this province, I am as qualified as anyone to state whether or not these proposed future pulp mills will become a reality. Also where these pulp mills should be located in order to have an absolute guarantee of sufficient pulpwood supply for their primary output, along with future plans for expansion purposes.

"Statistical data gathered from many sources, and I might add data that is respected all over the world, backs up the forecast that in the year 1975 there will be twice the demand for pulp and paper products than there is at the present time. In other words there must be in the planning stage of all companies, twice the output in order to supply the great increase in demand.

"The facts and findings of the Commission that will be sitting in the near future regarding the railways problem in selecting a route either from Grimshaw to Pine Point or Hay River, or from Waterways to Pine Point or Hay River, I believe, will naturally have to be based on very sound thinking









and all advantages and disadvantages will be properly weighed in the minds of those concerned with the decision of this Commission. So what are the main factors which will supply the necessary leverage to make a decision on one route or the other? I believe they are as follows:

1. What would be the expected tonnage at the present time and on the long-term outlook.
2. The number of people that this railway would serve at the present time and in the future.
3. The cost of the construction of the one route against the cost of the construction of the other (this cost factor can certainly be minimized, as the long-term outlook would certainly ease any additional cost on one line or the other, due to favourable factors).
4. The future connecting links as regards new railway routes from the two lines now proposed.
5. What advantage will one route or the other have in promoting new industry, in opening up the fabulous northlands, in satisfying the people of the Dominion of Canada that the money to be spent on a new stretch of railroad is well spent and wisely chosen.

"As I am dealing with my own field, which is pulp and paper and timber products, I must give a few comparisons on what I believe will be a deciding factor in forcing the pulp and paper industry









into the Province of Alberta. Most important would be the lack of good quality softwoods in the United States and other parts of Canada, and the lack of all assorted timber stands to fulfil the future planning for expansions that will have to take place. In comparing the Province of Alberta with the Provinces of Ontario and Quebec, the Province of Alberta has one pulp and paper mill, whereas the Province of Ontario has forty or more, and the Province of Quebec fifty or more. While the Province of Alberta has half as much timber as the Province of Ontario and again roughly half as much timber as the Province of Quebec, it would certainly be sensible to assume that Alberta should have at least twenty pulp mills, thinking along the lines of required supply. Alberta is famed for its high quality of softwood timber species, being another point in favour of the industry moving this way in the near future.

"The large tracts of timber suitable for pulp and paper manufacture lie generally in the western part of this province extending from the eastern slope of the Canadian Rockies in a northwesterly direction to the Peace River area, hugging the western part of the province.

"It is not the intention of the writer to intimate that timber stands do not exist in the eastern part of the Province of Alberta, but from studies as to economical operation and location, etc.,









it was apparent that the eastern part of the province would not support the quantity of pulp mills which will move here in the future, as well as the western half of the province.

"Let us say for argument's sake that one pulp mill could be safely established on the eastern section, and four pulp mills could be established on the western section. These pulp mills would be based on a daily capacity of 450 tons each on a 330-day operating year. Add to this the incoming tonnage to the mills, which roughly would be 30 per cent of the outgoing tonnage, and you will arrive at a tonnage figure which the railways would certainly accept as a sound reason for spending the required amount of money on such a route that would make possible that industry.

"The pulp and paper industry in Canada is a large and sound one and is one of the largest exporters of goods from Canada.

"The pulp and paper industry employs a large amount of people and is noted for being one of the highest paid industries as far as the people who work for it are concerned.

"Pulp and paper going into any community or into any area is noted for the opening up of that area by causing many other businesses and people not directly connected with pulp and paper to locate around such a venture.









"It is my understanding that in the Peace River area there are approximately 80,000 people who are occupied in farming and in other businesses that go along with farming. From our experience in the pulp and paper industry, wherever the people working on the land are concerned, the industry assists them, in that in off periods they generally work for the pulp and paper mill, either in the woods or in the mill, thus giving them an income along with their farm which enables them to live a proper life.

"Fundamentally a pulp project must operate on a sustained yield basis in perpetuity, meaning that the project cannot cut more timber per year than the annual growth. In other words, adhering to good forestry practice. Therefore, the project must have under their lease a raw supply of timber which will supply that project for an unlimited period of time and one that will also allow for further expansion. The various large blocks of timber in the western part of the province fulfil these requirements both to economical operation and supply, and I do not believe this applies to the eastern part of the province.

"The question will arise as to the timing of more pulp mills coming into the Province of Alberta, and I would say that it would be most difficult to accurately predict this, but taking the broad view, it is certainly known, but generally not admitted,









that there is a distinct move to the few remaining timbered areas in North America, so we can safely say that pulp and paper mills will not be too long in coming, which will make the Province of Alberta one of the great pulp and paper provinces in the Dominion of Canada.

"When we were talking about movement of pulp mills to this province, it is generally the impression that we are talking about the expansion of industry from the United States to this province. This is not the exact facts, as from our studies we know that many European financial groups are definitely interested in moving this way in the near future. The supply of excellent quality raw materials in a substantial volume, which we have in the western part of this province, will satisfy the most exacting investors. It has been said that in some of the European countries every single tree is earmarked for some pulp or paper mill, and this is a true fact. This lack of raw material again makes very promising the tremendous volumes of timber in this province.

"I have dwelt on the possibility of pulp and paper extending in the province for one reason only, and that is to try to satisfy the question that will arise on the Commission's hearings and that would be that, although they cannot help but agree on the tonnage which could be expected, what would be









the possibility of that tonnage becoming a reality, and consequently I hope that what I have said will convince the people concerned of the fact that the pulp and paper industry is here now and that the future will certainly prove that expansion in this industry will move onwards at a steady pace."

As this statement indicates at its outset, this is a statement of conclusion. I understand that Mr. McNab would be prepared at some appropriate time to give explanation of the conclusions which he has reached should this Commission so desire.

THE CHAIRMAN: Would this be a convenient time to adjourn?

MR. BONNER: I think so.

THE CHAIRMAN: Suppose we adjourn until 1.45, and then I think we can surely finish the afternoon's proceedings.

---Luncheon adjournment.









On resuming at 1.45 p.m.

THE CHAIRMAN: Mr. Bonner?

MR. BONNER: Mr. Chairman, we had concluded at the point at which the statement of Mr. McNab, President of the Alberta West Forest Products Corporation Limited had been read into the transcript. That appeared to conclude the portion of our formal brief having to do with pulp mills.

THE CHAIRMAN: Before you leave the question of pulp mills do I understand that you feel that there is not enough pulp south of Grande Prairie for a pulp mill. That is, that you must have some of the timber north of Grimshaw?

MR. SOUTHWORTH: May we call on Mr. McNab?

MR. BONNER: The point of this statement is to the effect that the area under examination does support pulp possibilities, not necessarily to the the exclusion of other areas which could only brighten the picture but within the area delineated by the timber concentration it was the opinion of the brief and I believe could be inferred from the statement of Mr. McNab that pulp potentialities exist. I think if you add other areas to it I think you may see pulp possibilities exist but in the context of this area pulp possibilities are a realisable factor.

THE CHAIRMAN: In fact, you suggested 20









pulp mills for Alberta.

MR. BONNER: That is the total area, yes.

THE CHAIRMAN: I suppose that would mean several in that area covered by the coloured map that faces page 9?

MR. BONNER: I believe that is a provincial total, the 20.

THE CHAIRMAN: Yes, but of the 20 would you say there would be several?

MR. BONNER: Several within that region, yes.

THE CHAIRMAN: Because as a matter of fact there is not much timber south and east?

MR. BONNER: No, that is right. I think that was a working back from Ontario and Quebec experience based on their timber concentration what should be their potential within this region. It is a fact that pulp mills at Tidewater are in a position of difficulty from a standpoint of establishment but that is why, certainly in the west, pulp mills have for the most part, been located at Tidewater. However, with access provided pulp mills within interior points do become a possibility in view of the increasing demand for pulp production. The contention is that Alberta is one of the regions in which these possibilities present themselves.

THE CHAIRMAN: There is one specific pulp mill proposed for Grande Prairie.

MR. BONNER: Yes, as a possibility.

THE CHAIRMAN: Now, if a mill were built









as proposed would it require some pulp from north of Grimshaw, do you know?

MR. BONNER: I think the likelihood is that it would. I do think, however, that our studies were not directed to that particularity. The precise area required by a pulp mill should be a subject of detailed forestry and Government investigations which have been undertaken. Perhaps Mr. McNab could answer that point with particularity. Mr. McNab, could you meet that point of particularity with the consent of the Commission?

THE CHAIRMAN: Yes, thank you very much.

MR. McNAB: I had better give you this map and explain what I am going to explain. On this map the colours are defined to detect the leased area and the provisional area and make a boundary line of each. The idea of that, of course, is to lease areas for the present planned production. The other colour or the reserve area is for the planned expansion program.

MR. BONNER: What are the two colours?

MR. McNAB: Blue, and this map is our own map so it would not be established in the Government, these colours. These were just defined for the purpose of each area so blue is the leased area and the orange or pink is the reserve area in that particular case.

MR. BONNER: May this be entered as an exhibit?

THE CHAIRMAN: Oh, yes.

MR. McNAB: That is the north western pulp we are talking about.









THE CHAIRMAN: You referred only to the blue and pink.

MR. McNAB: Yes. Now, we come to another lease, another consideration and this has to be explained. Alberta Pulp Mills have a letter of intent which they are again discussing with the Government for a proposed mill and defining the leased area as green. Again, the reserve area has a slightly orange colour. In other words, to state that to run a pulp mill, a 450 ton mill you must have 350 square miles to be able to operate on a sustained basis in perpetuity, in other words, to cut just what grows and Mr. Bonner explained that is their policy, to utilise the forest in a proper manner, you must go into an area large enough to make that possible. This applies to 6,000 square miles in Rocky Mountain house vicinity. Then, we come to the Alberta West Forest Products which is the light cord area and the lease is defined by the green colour. The provisional area is yellow. In the green coloured area is 2500 square miles, the leased area is another 2500 square miles because in this work, a newsprint mill, you do not require the amount of timber to give them their required production.

Then, from there we go to Grande Prairie which is again further north and you ask the question whether it would be necessary to bring wood in from north of Grande Prairie to this mill. We find out that the plant is now to go in and inspect these areas by an inventory cruise, what we call a forest survey, the same as has been done in









these others to absolutely satisfy the financial partners that there<sup>is</sup> sufficient pulpwood in here to supply the mill.

This is not confined in two colours, I think there are 6,000 square miles, that is in the light green outline. This is all the area applied for in a letter of intent from the Government. When the inventory cruise, the reconnaissance is completed the Grande Prairie people will define the leased area and the provisional and apply for licence.

THE CHAIRMAN: It would appear to me now, Mr. McNab, that the area outlined by green referred to as the possible pulpwood area is sufficient for one mill.

MR. McNAB: Yes. But whether or not it is sufficient, you go up into this northern part to procure, purchase pulpwood which is your most economical wood for pulp. That is where the wood would go into the Grande Prairie area from the settlers in this northern part. Feasibly speaking you could bring pulpwood, and they do it in the United States in many cases, a distance of 100 miles to a mill and still procure pulpwood of a value that is economical to the mill. In other words, you could go to an area 100 miles up and to bring that wood into this location. If necessary, some usually buy more and some less, sometimes cut some for its limit to satisfy a Government on a good forestry basis. As I say, it is flexible year by year. More could come out of here on an expansion program and perhaps again









more would come out of the north up to say 100 miles north of Grande Prairie. From there then past that. Up to as far as the boundary of Alberta and going over to the Peace River and possibly past the Peace River. In the larger area you can see in relation to that small area where people there, through casual study, because we have not walked the land, we have not had it photographed, all that is involved. There is a possibility, no doubt, for two pulp mills of a similar size. It means a similar limit as each one of these has.

THE CHAIRMAN: What would you say about the possibility of a railroad around McMurray and west of the Athabasca River?

MR. McNAB: Again, this has been checked over, not by inventory cruise or by certified survey report, but a great many people have been interested in that area and there are findings. If you are contemplating a mill in that area, Waterways or Lac La Biche or further north than Waterways, it would involve a great deal of water transportation of pulpwood. It is certainly possible and feasible except that a lot of companies are going out of what you call river driving, because of the loss in sinkage of wood and wherever the land is all right for roads they truck it. It is possible. In these areas you run 20 cords per acre and in this Province we do not take a back seat to British Columbia or any other Province as far as quantity and quality of pulpwood.

We think it is better than British Columbia.









When you talk of 20 cords on an acre you take the 6,000 square miles to get the required amount of production per year which is an average of 315,000 cords per year. Generally speaking, you would have to have double the size of that area to get the same quantity of timber to operate on a sustained yield basis. Economically speaking. Again, I think Mr. Bonner mentioned that fact too, that your roads would be longer, your whole operation would be much more expensive because you are going twice as far for the same kind of timber.

I believe there is going to be a mill there, because the way the world markets are and are going to be, it will be taken up in the future.

COMMISSIONER GAINER: What was the basis of your statement that the timber density was about half of this are over here? Is that what you suggested?

MR. McNAB: Put it this way, when you are talking about -- Let me put it another way: The density is again an effect of soil conditions. Your stands in that area are due to the lay of the land, more subject to fire hazard. The valleys, of course, have stands of mature and over mature lumber, saw log timber. You have just half the density or half the cubic content that you have in this stand of timber running from here. You can see the trend of it.

COMMISSIONER GAINER: That is what I am asking you: How do you know, from photography work? Has it been cruised?









MR. McNAB: Yes. The Government has maps and as I say, we take the general impression of the Government from aerial photography which is fairly accurate for a person going in with a plan to build a mill. In other words, you can see so much but once you reach there their information is not sufficient, you have to have your own cruise.

MR. ROETHEL: The MacGregor report says more pulpwood in here, much more than on the other side in the east but in our brief, our own appraisal of the various reserves, not even twice as much in the same area about the size of this area.

MR. FOUKS: I believe we have photographs of this.

MR. ROETHEL: This is something different, you took from the whole eastern area there is less timber in it.

COMMISSIONER GAINER: You would feel that this checks with the photography index figures which the Alberta Lands and Forests Department have for this area.

MR. McNAB: I would say so. Again, going back to the practical knowledge that we must obtain before investing \$50,000,000 we assume that on a rough outline we certainly do not take it for full facts.

COMMISSIONER GAINER: The other question was: This Alberta west reserve for prospective running of the Alberta Pulp Mills, prospective leases, those are still in the initiation stage covered by lease?









MR. McNAB: The licence out of Alberta west was taken out, all completed studies and the financing just about through. The Alberta Pulp Mills will apply for a licence within the next month and studies and so forth have been completed. However, the financing would be in the vicinity of a year.

COMMISSIONER GAINER: Now, in cases of this kind -- this is what I am really getting at -- the location of these particular areas that may be surveyed for potential, to what extent is that determined by Government willingness to do the inventory? Take it that they may have done it, who determines the location? Is it the lessee that specifies a preferred location or the location he may be interested in, or does he simply ask for an appropriate area, indicate an interest in an appropriate area of such and such a cordage?

MR. McNAB: It is difficult to answer. However, to put it in a broad way, the whole Province of Alberta up to 6 years ago was wide open for the pulp and paper industry. You could go in and say to the Government of the Province of Alberta that you were interested in a certain area because you believed there were studies that showed sufficient pulpwood in that area, sufficient quality and of a nature lying on land that would tend to bring all that pulpwood into an area where a mill could be located with sufficient water and so forth. In other words, you would study it and find out if there is a location in this area for a mill, is it sufficient to supply a mill.









You go to the Government and say you would like to buy that land with a letter of intent. With the Government studies they have already done and the aerial studies you have a certain amount of information. However, you say you do not believe it is all correct, that you will check it yourself to be sure.

COMMISSIONER GAINER: Now, it would be a case, I expect, that whatever information is available and inventory and photography work is about the same for any part of the area. Is that true? Any interested party in going for preliminary information would be able to find out as much about the north eastern area as he could the western area? Has there been more work done in one area than the other?

MR. McNAB: Put it this way, I do not believe there is in Alberta any work done in Wood Buffalo Park. I do not think anyone can say truthfully what is there except in a broad way. But, I would say in the rest of the Province particularly down from let us take halfway up the Province, there is great detail gone into by the Provincial Government in forestry information and inventory. Going north there is certainly a lot of information sufficient to interest any party going in with that much knowledge and they certainly will have to know what knowledge they need to go in.

THE CHAIRMAN: Mr. McNab, I think you said that the Alberta West Forests Products are almost financed?

MR. McNAB: Yes.









THE CHAIRMAN: And the Alberta Pulp Mills appear to be within a year?

MR. McNAB: They are on the road and a great deal of interest has been shown and it looks very promising.

THE CHAIRMAN: And with regard to Grande Prairie?

MR. McNAB: The company has just been incorporated in the last two months and naturally the first stage is to have the forest survey which is being done right now. When that survey comes out in about 6 months time they will be in a position then to go and marry up with a financial partner. Even now, there is some interest shown in the financial part of it.

THE CHAIRMAN: The pulp business seems to be increasing very rapidly?

MR. McNAB: It is.

THE CHAIRMAN: We understand that there are prospects of two more pulp mills having sufficient reserves north of Grimshaw?

MR. McNAB: I would say north of Grimshaw.

THE CHAIRMAN: And at the rate things are going it will not be too many years before these mills are built?

MR. McNAB: Well, if there had been a railway in there our group possibly would have had an investigation carried out long before this. This is one case where a railroad is pretty essential to carry out any









investigation work about a pulp project, because it costs you money and people in this Province who make it possible to create these services are individual Canadians and they are all participants in that initial company, local participation, and they could not afford to go up into an area past Grimshaw where there is no railroad and then wait for 10 years to make that pulp mill become true. It would just be too hard financially. Once you hire your limit you must pay your ground rent.

THE CHAIRMAN: In your opinion if the railroad were built north of Grimshaw there is a reasonable prospect of two pulp mills being established?

MR. McNAB: They would be in there very shortly if they absolutely knew that railroad was going in there. It would not be very long before the Provincial Government had some inquiries.

THE CHAIRMAN: What about the area north of Waterways? You expressed an opinion a while ago that it requires twice as much land, twice the area.

MR. McNAB: Yes.

THE CHAIRMAN: Still at some time you think the pulp mill will be built in the general Waterways area?

MR. McNAB: That is true.

THE CHAIRMAN: How many would you think there would be in the area?

MR. McNAB: I cannot see more than one mill.

THE CHAIRMAN: You see only one mill?









MR. McNAB: That is right. Let me put it this way, unless there was a great advantage given to a company coming in in that area to build a mill, which this Provincial Government does not give, there is no assistance taxwise or any other way in a pulp mill, that would be much slower.

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THE CHAIRMAN: A few minutes ago when I was asking you about the prospects of a pulp mill in the McMurray area I asked you about the area west of the Athabasca and Slave Rivers -- the general area, say, around McMurray. Do you think if a railroad were built north of McMurray that might encourage one mill?

MR. McNAB: I would put it this way, that not nearly as much as putting it past Grimshaw, where you would encourage a group to come in much faster because there is better timber.

THE CHAIRMAN: But if there were one, there would be one on the McMurray side as against two on the Grimshaw side?

MR. McNAB: On the Grimshaw side there would be four.

THE CHAIRMAN: That is the area where it is proposed for the railroad.

MR. McNab: Yes, on the railroad part of it.

THE CHAIRMAN: But on the McMurray side you are referring to the area that excludes the Wood Buffalo National Park. You are not familiar with what possible pulp there is there?

MR. McNAB: I don't believe anyone is. But fundamentally, through, let us say, again casual studies, from a general impression there is enough wood in the Wood Buffalo National Park to run a pulp mill on the same basis.

THE CHAIRMAN: Now, to come back to the west









side, can you tell me what you think of the area west and north of Great Slave Lake? I think we were referring to the valley of the Mackenzie River.

MR. McNAB: There is a good deal of timber in the Mackenzie basin. I don't know if this group are aware of it, but the Japanese were very interested in purchasing up to 500,000 cords a year and driving it down the Mackenzie, barging it. They made a fairly accurate study of the potential in the Mackenzie basin for pulp wood.

THE CHAIRMAN: Are the Japanese people thinking of taking logs down the Mackenzie River and then making pulp?

MR. McNAB: Yes.

THE CHAIRMAN: That is a great convenience to us.

MR. McNAB: This was another one of their propositions and they spent quite a lot of money in studying it.

THE CHAIRMAN: Suppose that were to be done, would the building of a railroad up to the south shore of Great Slave Lake be of any assistance to them?

MR. McNAB: No.

THE CHAIRMAN: It makes no difference at all?

MR. McNAB: No.

THE CHAIRMAN: Apart from the Japanese at all, what do you say about the Canadians developing a pulp mill?

MR. McNAB: Again, if you get down to a









certainty, I couldn't say, but it is certainly possible to get railroads in there.

THE CHAIRMAN: If you had a railroad through Hay River, would that make it a reasonable prospect, would you say?

MR. McNAB: It would be in the future, in the long future, because of the fact that as your railroad again -- if you say that it goes by the Grimshaw route -- there are only so many mills can be built each year for the increased demand; but if this railroad goes through there and then the railroad goes on up -- let us put it this way: There would be a great deal of interest in there if there was sufficient timber found and it could be economically logged; the railroad would be of great assistance in bringing in people to do it.

THE CHAIRMAN: If the railroad were to go through Hay River, you think that would create more interest as far as the Mackenzie valley is concerned?

MR. McNAB: Yes, because in pulp and paper -- as Mr. Collins stated, if the railroad moved past his area or in his area, not only his company but probably 25 other ones would be up there cutting lumber. Either one would bring in that advantage, whichever way the railroad went. It would certainly have the advantage of bringing in the financial people to investigate it.

THE CHAIRMAN: That is for the prospects of pulp in the valley of the Mackenzie River and the Liard River?









MR. McNAB: Yes.

THE CHAIRMAN: Would it be any better from the point of view of the pulp industry if the railroad went as far as Fort Providence?

MR. McNAB: In the long-term future, certainly.

THE CHAIRMAN: If the railroad were to go to either Hay River or Fort Providence it would mean that a lot of water transportation would have to be resorted to.

MR. McNAB: Water transportation from the mill isn't too expensive a factor. Water transportation wouldn't have a big bearing if you had to join one railroad with the other by taking it over by water.

THE CHAIRMAN: You don't want to carry the logs by water?

MR. McNAB: No, because your sinkage factor comes in, which is a fairly sad experience in Canada and other areas where they have water-driven material.

THE CHAIRMAN: Yet the Japanese were thinking of bringing it down the Mackenzie and all the way to Japan.

MR. McNAB: That was the thinking, but the time allowed for the driving of the logs, which was approximately 2 months, and then running into the ice in the ocean, it again was something they couldn't get over. But they did come up with the idea of piling the pulpwood on the banks, loading it on the barges and again trans-shipping it to Japan. The whole thing, as far as I know, has fallen through.

THE CHAIRMAN: Mr. McNab, with regard to the









Mackenzie and Liard River valleys, you say water transportation is satisfactory as regards to pulp itself.

MR. McNAB: Yes.

THE CHAIRMAN: Would it matter, if you were dealing with the Liard River valley, whether you had to ship down the Hay River or over to the mouth of the Slave River?

MR. McNAB: Well, on the basis again of rail rates, your freight rates are not pleasing to anyone, and you would benefit after you once came off the water to get your international rate to the Chicago or Milwaukee markets, and that would be the deciding factor. The railroads are pretty fixed on rates and it is certainly pretty difficult to answer. In other words, the shorter distance those goods would move -- I don't think it would matter to the railroad one way or the other because you would have an equalized rate in there somewhere. But when you are moving dry pulp that distance from one port to the other port wouldn't be a great factor.

THE CHAIRMAN: Is this a fair way of putting it, that the difference in the cost of shipping 100 miles by water and 200 miles by water is not very great?

MR. McNAB: No, not on the long-term program, not on the long-term it doesn't. The railroads still haven't come to that point where you can decide the better deal by giving them a long-term contract. They are hard to beat down on rates, that is all.

THE CHAIRMAN: Would you mind looking at









Exhibit 45A? It was pointed out to us that if there were a port at Providence, any transportation down the Mackenzie River, all transportation down the Mackenzie River lasts for a considerably longer period than transportation from the Slave River to, say, Fort Providence. Let's put it this way: The further you come out here the shorter is your transportation season. If the lumber or the pulp industry were to come down in Mackenzie valley, presumably there would be a few months of the year only of water transportation. Is that a very serious factor as far as pulp is concerned?

MR. McNAB: Well, it is a serious factor because of the fact that storage facilities have to be so enormous. If you only ship out a few months you have to store your pulp to get it out in the two months.

THE CHAIRMAN: Is pulp stored out of doors?

MR. McNAB: No. Well, actually the pulp is stored out of doors, but certainly not unless you have to.

THE CHAIRMAN: Perhaps we can summarise what we have been discussing. I take it that pulp can be stored out of doors, but not too satisfactorily?

MR. McNAB: No. It gathers moisture, and if you are shipping, naturally you are paying more for shipping.

THE CHAIRMAN: So it is really a serious handicap to have your transportation blocked off for part of the year?









MR. McNAB: Yes.

THE CHAIRMAN: And that would be a drawback in developing the pulp industry?

MR. McNAB: I would say seven months of the year as compared to five of a shut-down, because you do have that on the lakes, but that is only a period of, say, 4 or 5 months, or probably 3 months, and they get by because they do have the facilities to store, and they do have shipping too; shipping over the Great Lakes is a factor there. But when you have a 10-month shut off period -- you are producing 450 tons a day -- you can imagine the tremendous area you would have to have to store the pulp on hand.

THE CHAIRMAN: How long is the Mackenzie River open for transportation?

MR. McNAB: Well, the information we have is that for navigation, 2 to 3 months, when you are talking about taking a valuable cargo down. Now, you can navigate it a lot longer than that by boat to get up and down. But you are talking about the way the Japanese taking heavy loads down by barge. They had a leeway of 2 months in the whole year, due to ice conditions in the ocean and the river being too dry and again being too low and all the channels form sand bars, and so forth.

THE CHAIRMAN: What about the area from the Liard River up to Fort Providence. There is no problem there about icing.

MR. McNAB: There should be no problem at all.









THE CHAIRMAN: How long would you have of a period there for transportation?

MR. McNAB: I would say it is certainly over double the period of the Mackenzie.

THE CHAIRMAN: Say 4 or 5 months.

MR. McNAB: Yes.

THE CHAIRMAN: Could you express any opinion as to whether that might be feasible for the pulp industry?

MR. McNAB: This all is feasible. It has been looked at the same as you are doing, on the long-term basis up to the next 20 years; and, as the industry knows, let's say all over the world, they must move their timber someplace, to get into the Alaska, and Alaska is about the only remaining large untouched stand of timber -- with the long-term outlook and with the increase taken again of double capacity up to 1975 and with the inventories, let's say, being sufficient today, with double the capacity, you have to look for an enormous amount of timber. That was the long-term view. There are a lot of possibilities there. Wherever there is timber of sufficient quality and quantity there will be a pulp mill.

THE CHAIRMAN: Thanks very much, Mr. McNab.

Mr. Bonner, you thought that there was something that should be added to this question of pulp.

MR. BONNER: I wasn't quite certain the way the line of the questioning was taking when the Liard and the various other points were mentioned in the north, and I find when your Lordship summarised that question that









point wasn't touched.

THE CHAIRMAN: What did you have in mind?

MR. BONNER: I think it should be said in fairness that the northern reaches of this region are, in point of sequence, less likely to be touched as to pulp because of the distance involved; and, secondly, between the east and west sides, the east is the last part likely to be considered because of the density of the forest cover. That was the point that I hoped was not overlooked in the discussion, because the density and distance to market are the factors which will dictate the question of pulp development which we have discussed in this examination, and therefore the possibility that pulp might be created in one or more points in the north and shipped from one end of the Slave Lake over to the other, with no regard to cost, is not a practical situation. Now, you are not going to pulp at various points, you are going to pulp at the railhead and bring it in wherever that happens to be. I think that will be found to be the case. Therefore, whether it is by truck or not, your railhead location for your pulp inland is still going to be the most important consideration in assigning priority to development in the region we have been discussing.

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THE CHAIRMAN: You are emphasizing the possibility of those two pulp mills?

MR. BONNER: Yes, that is right.

THE CHAIRMAN: The two proposed pulp mills north of Grimshaw as against the proposed pulp mill around Waterways and in the river valley?

MR. BONNER: That is correct.

COMMISSIONER GAINER: Perhaps I should have asked Mr. McNab this question for my own enlightenment. Perhaps you would just summarize briefly the importance to the pulp industry of the different species of timber and how much weight is given to that in this question of density? How much does it depend on the kind of spruce, pine or poplar?

MR. McNAB: Do you want me to answer that?

MR. BONNER: I think Mr. McNab was asked the question?

THE CHAIRMAN: Yes.

MR. McNAB: The species is certainly important -- the spruce and pine. Whatever the yield of the certain species -- some yield more per ton -- naturally is an economic factor -- the quality of the wood. You can use today, with the new processes -- going into semi-chemical processes you can use wood that you would not have been able to use going back ten or fifteen years ago. Certainly on inferior wood you don't get the yield and when you use inferior wood you add more chemicals to build up the quality; but









in the province which we are dealing with the species you have here is the white spruce and the lodgepole pine. The lodgepole pine, to clarify it, is a different thing from the ordinary jackpine, and it is pretty well a proven fact that the yield in the lodgepole into tons of paper is approximately 15 per cent greater than the jackpine. In other words, your lodgepole in this province proves a very valuable species and is pretty well up to the white spruce.

COMMISSIONER GAINER: It is almost up to white spruce?

MR. McNAB: Pretty well -- within a very small margin; so you have two species of wood for pulping. You can pulp any type of wood for paper if you wish to do so in any process which you wish to go through.

COMMISSIONER GAINER: Is it the practice, or is there a requirement of that type in your lease, or do you not make a practice of doing that? Are you required to do that?

MR. McNAB: In your agreement with the Crown you must utilize the forest to the best of your ability. In other words, if you find, in your processes, that you can't use, let us say, a hardwood the Government does not force you to do so; but it is generally conceded that you should go into processes so that you can utilize all of the timber, which, in these mills, the attempt is to do that.

COMMISSIONER GAINER: So that, generally









speaking, you would prefer a stand in which you find a concentration of lodgepole as opposed to poplar?

MR. McNAB: Yes; although in many processes up to 30 per cent poplar is not out of order; and, generally, those areas in there run about that -- 30 per cent hardwoods and the balance -- 50-50 -- spruce or lodgepole.

COMMISSIONER GAINER: You can handle these although it might be a little more costly to do so?

MR. McNAB: Yes; of course, there is a use for poplar. The white poplar doesn't make plywood, because it is generally faulty when it gets old. But with pulping processes there is certainly a great future for the pulper in the province.

MR. BONNER: In connection with Mr. McNab's reply it is interesting to note that the concentration of the more usable wood does coincide with the western route, as well.

COMMISSIONER GAINER: Would you say that in respect to spruce or . . . ?

MR. BONNER: Lodgepole, for the most part. May I now proceed to the agricultural development?

THE CHAIRMAN: Yes.

MR. BONNER: The Prime Minister of Canada indicated the national government's thinking on the matter of agricultural development in his statement on August 10th of this year in which he quoted a









Vancouver newspaper as stating:

"I believe that the national welfare demands a  
"policy to assure greater prosperity with the  
"development of an agricultural programme both  
"comprehensive and cooperative."

In respect of the eastern region which we are  
examining it appears that there is no agricultural land  
to be served by the railroad.

In the western region it is asserted that the  
railway will assist agriculture in the areas tributary  
to the route by:

- (1) Lowering transportation costs and making  
practical a shift toward more diversified  
crops and the production of live stock and  
livestock products:
- (2) Opening up approximately 2 1/3 million  
acres of arable land for settlement purposes,  
thereby increasing the population and wealth  
of the region:
- (3) Enlarging the agricultural base for food  
supplies required by the industrial centres  
of the Great Slave Lake area. The Fort Ver-  
million area is only 200 miles south of Great  
Slave Lake and is the logical source of agri-  
cultural supplies. On the East Route the  
closest base is Lac la Biche, 600 miles  
away from Great Slave Lake. The MacGregor  
Report points out:









"One other aspect of Alberta's business with the north should be mentioned here even though as yet it is not important dollarwise. That aspect is the proportion of agricultural production of the Peace River country and of the Fort Vermilion area which goes north to supply the towns of Hay River and Yellowknife. This volume may not be great today but as the population in the Northwest Territories increases the volume will increase until it may go far to becoming a major market for the Fort Vermilion area."

THE CHAIRMAN: Before you leave that -- and, perhaps, this is not a fair question to put to you because you haven't heard the evidence, Mr. Bonner -- but it was suggested to us in Fort McMurray that there was a lot of first class agricultural land north of Fort McMurray; that grain is grown very successfully at Chipewyan . . . is that right?

MR. FEEHAN: Fort Chipewyan was, I think, mentioned. A world wheat crown was obtained there by the Roman Catholic Mission.

THE CHAIRMAN: It is grown on an experimental plot?

MR. BONNER: Yes; that is the key to that bit of evidence, that these are garden plots, or experimental plots, and not commercial agriculture.

THE CHAIRMAN: It has never developed into









commercial agriculture, but supposing a railroad went through north of McMurray might there not be a reasonable prospect of agricultural development up north to supply the area north of that again? I have reference just to the last sentence of the quotation you have taken from the MacGregor Report.

MR. BONNER: I think the partial answer to that question is that it depends on what population it is intended to serve and what useful land there is, and it also lies in the fact that the construction of a railroad is not likely to greatly change the usefulness of the soil which is in the vicinity of where the railroad goes.

The Department of Extension of the University of Alberta has an extensive map here showing the soil of Alberta. That might usefully be filed as an exhibit. It shows, in considerable detail, what is involved in the potentialities of the land being traversed.

I am willing to concede the possibility that experimental plots or even garden plots can be found in areas of poor soil, but from the standpoint of large-scale farming which, we understand, is the industrial basis of the prairie provinces and Peace River, I don't think it is possible to use the soil as a potential for that type of development without a great deal of enrichment being provided to the soil. I don't think it exists as a basic fact.









THE CHAIRMAN: You suggest that for a garden plot, or an experimental plot, a particularly choice section of land has been selected?

MR. BONNER: I think so; and, furthermore, in a garden plot, or an experimental plot, a certain amount of soil enrichment may occur at the hands of the person who is developing it for his local purposes, which would not be economically feasible for large-scale farming operation; and taking a look at one set of land against another I think it is possible that the area at McMurray has a lesser potentiality than the area to be encountered on the western route.

THE CHAIRMAN: I was referring particularly to this particular section if the population in it increased.

MR. BONNER: As an example, in the Yukon there are garden plots where all manner of vegetation has been grown, but that doesn't make the Yukon an agricultural area.

You can do a good deal of preparation by drainage and by soil enrichment on a small scale, which you couldn't undertake to do if you were going to do it for commercial purposes.

THE CHAIRMAN: Would you file that map as an exhibit, Mr. Bonner?

MR. BONNER: Yes, indeed.

THE CHAIRMAN: That is prepared by the Department of Extension of the University of Alberta?









MR. BONNER: Yes.

COMMISSIONER GAINER: Is it your feeling that soils which we know as grey wooded soils would not require enrichment, or how would you evaluate these in terms of an agricultural potential?

MR. BONNER: Well, the cost of clearing land which is even lightly covered is such that, unless you have a comparatively neutral soil once it is cleared, the man who farms on the frontier, so to speak, has a very difficult time. Most of our large tracts of wheat have simply been land turned over to the plough from raw prairie and has required not the sort of enrichment which, for example, wheat acreage receives in France which is one of the largest producing areas in the world, as we all know.

It is the nature of our economy that we have to have a fairly cheap acquisition cost for agricultural acreage in the north. If we have to take soil and prepare it extensively -- we are in a different type of economy than that -- but if we are going to prepare it extensively we will be in a different type of economy than the one in which we presently find ourselves.

For those who fear that railway service to northern Peace River sections would merely aggravate the present surplus wheat problem by accelerating development of the large arable tracts of lands left, the following should give pause:









First, the ratio of wheat grown to other crops is much less in the north Peace River section than in the south.

Secondly, Dr. Bentley, Dean of Agriculture, University of Alberta, states -- and this is a submission which is produced for you on page 76 of the agenda -- that:

- (a) Demand for livestock and livestock products is increasing:
- (b) The present agricultural economy of the Peace River area does not involve a sufficient proportion of livestock:
- (c) Forage crops are more suitable for the soils of the north area:
- (d) A livestock enterprise makes much more effective use of farm labour:
- (e) The development of an industrial community would accelerate the shift from a grain economy to one involving some livestock. If a large industrial development took place the effects on agriculture in the Peace River country could be more extensive and fairly rapid.

The basic point, however, that I want to draw to the attention of your lordship and the Commissioners is the implication of arable land being opened up; and we turn to this point in consideration of community development in the east and west regions, which are









the next two main items for consideration.

In the eastern region the terrain is not conducive to the establishment of permanent communities. The two settlements in the east region, Fort Smith and Fort Fitzgerald, contain presently only 1600 persons. Exploitation of natural resources in the region may add somewhat to these settlements and create others, but population numbers in the region will remain limited.

By contrast, on the western side it may be observed that there are established settlements undergoing considerable growth.

In 1931 the entire Peace River District in both Alberta and British Columbia contained a total of 47,595 persons. Nearly 41,000 or 87 per cent of these were located in Alberta and approximately 72 per cent were in rural areas.

By 1958 the population in the Alberta section of the Peace River District had grown in excess of 63,000 and the ratio between rural and urban groups was almost reversed.









### Alberta Population Growth, Peace River District

1936	44,943 )	approximately 31% urban
1941	47,833 )	
1946	45,830 )	approximately 43% urban
1951	54,102 )	
1956	61,380 )	approximately 61% urban
1960 (estimated)	70,000 )	

Significant in this growth and the change in urban-rural ratios is the convincing evidence that the Peace River District has all the necessary attributes for the formation of a balanced and well-rounded agricultural and industrial community.

Reliable authorities forecast that with the advent of a railway, agricultural population alone north of Grimshaw will double within ten years. Pulp and lumber and petrochemical development will add permanent industrial communities, complementing the present agricultural expansion.

In addition, permanent self-expanding communities with a variety of service trades based on the firm foundation of agricultural and industrial development will create a more balanced freight movement by reducing the percentage of boxcars returning empty to sources of primary products.

In this way, as community development and freight traffic increase hand in hand, the West Route would offer the railway an opportunity for expanding revenue not possible to the same degree along the East Route.









MR. BONNER: It may be useful now to summarize the general regional aspects which have been examined.

The East and West Routes proposed pass through distinctly contrasting regions.

The East region is almost devoid of people as settlement presents great difficulty in the vast tracts of muskeg, rock barrens, and ponded waters. The railway would approach only one settlement of consequence, Fort Smith, along its entire route. Timber stands are sparse compared with those on the western side of the province, and the general aspects of the land are unsuitable for agricultural development. Known mineral deposits offer little in the way of traffic, and secondary industry is non-existent.

The West region presently supports a population group in excess of 14,000, and this figure would increase markedly once rail service is assured. The region is eminently suitable for community settlement and growth. One of the last great agricultural frontiers in North America is to be found in the region, and every year more applications for settlement land are made than there is land made available by Alberta's Land Settlement Board.

Good stands of timber exist in the region suitable for sawlogs, pulp and paper and plywood manufacturing. These offer extraordinary opportunities for development of a profitable traffic from timber and its allied secondary industries.









Discoveries of commercial deposits of gas and oil in northwestern Alberta is strongly indicated by growing knowledge of producing zones. The region thus has the potential for adding considerably to its present bountiful supply of natural gas, hydro-carbons, and the establishment of a petrochemical industry.

The supply of energy may be further augmented in the near future by production of electric power at Hudson Hope.

If the regions were to be evaluated on a strictly freight revenue-producing basis, the scales are once again tipped in favour of the west. North and south shipments of agricultural products, shipments of consumer goods both in and out of the district, and shipments arising from lumber and its allied products constitute a tonnage total considerably greater than that which the east region can generate.

For the future, a possible pulp mill and petrochemical plant enlarge the freight opportunities to a very substantial degree and completely overshadow the potentials which resource development offers in the east.

In short, the east region is limited in almost every respect while the west region is an area of growth, an area of exceptional potential, and an area which can substantially add to the economic future of Northern Canada.









### Concluding Statement

The foregoing analysis and associated studies confirm the position of the Government of British Columbia that the Great Slave Lake Railway should follow the West Route.

For minimum transportation costs to the Territories, for rapid and lasting development of the Peace River District, for economic growth in Northern Alberta and Northern British Columbia, hence in the national interest we urge the Commission to recommend the West Route.

Having made reference to the report of the Minister of Lands and Forests, I have a copy of the publication referred to which can be filed as an exhibit if you wish. It is entitled "Public Lands open for settlement in the Peace River District, Alberta."

THE CHAIRMAN: Do you know approximately the number of people who apply each year? Is it in the dozens or hundreds or thousands?

MR. SOUTHWORTH: It varies from the district and it is in hundreds.

THE CHAIRMAN: For the whole province?

MR. SOUTHWORTH: Yes. I think it is larger than that for the whole province but each district is labelled by itself and it is clearly laid out in the exhibit.

MR. BONNER: Could you turn them up so we can









have that for the record?

MR. SOUTHWORTH: Well, it is contained in several pages and that is why we wished to file the entire publication as an exhibit.

MR. BONNER: You say the applications for the Peace River district are in the hundreds?

MR. SOUTHWORTH: They are in the hundreds, yes.

MR. BONNER: Here for a further exhibit is a population map produced by the Alberta Department of Statistics in which there is noted regionally by Arabic numerals populations to be found point by point in the regions we have been discussing. Perhaps this would be useful as an exhibit. That exhibit is filed in support of the comparison of populations on the east and western concentrations of the province.

THE CHAIRMAN: Mr. Bonner, you have several exhibits or adendum to your brief and we have covered them all, have we not; except the matters you are going to deal with when Mr. Guest is here?

MR. BONNER: I think all except forest appraisal. However, that portion reads without too much difficulty and greatly complements the discussion which we have already had.

THE CHAIRMAN: We have referred to all that, and have you not summarized it in either what you have told us or the answers you have given to our questions?

MR. BONNER: Yes. If I might suggest there would be no useful purpose served in reading the









adendum in detail.

THE CHAIRMAN: You do not want to make any further reference to it?

MR. BONNER: No.

THE CHAIRMAN: It would seem to me we have covered it.

MR. BONNER: Yes, I think so.

COMMISSIONER GAINER: Mr. Bonner, there is just one matter that I wonder if you might care to comment on. This is something that is of considerable concern and will be of considerable concern to us. You may be aware that for some period of years a considerable body of people in agricultural circles have been worried about the land settlement policy and the prospects of settling or permitting people to settle in areas where the soil conditions or other things -- it would be a disservice to the settlers. Should they go in not only ahead of railroad facilities, but in regions which for many reasons may not show a very great potential even though physically it may be possible to farm?

Now, how important would you think this kind of consideration was, having in mind the agricultural potentials which you have indicated in the areas of 100 to 150 miles north of the present railhead? Specifically I think you mentioned in summary form, on page 13, that with the advent of the railroad agricultural population alone north of Grimshaw will double within ten years. I suppose what I am asking









now is, is this all for the good or is it a mixed blessing, or how would you look at this?

MR. BONNER: If the question of permitting settlement were applied to existing regions in the country I could think of several important jurisdictions of Canada which on economic grounds might be cleared out. I contend that it must be the philosophy of this country for many years to come to allow people to settle where they wish if land is available for them. In fact, if people had not come in overland into the Peace River, as they did fifty years ago, it would be questionable to what extent the Peace would be important to us now. Yet, I would venture to suggest if one man whom I know to live in the Peace River had been prevented from the standpoint of public policy from going into homestead it would have been a disadvantage to the country in the long run, notwithstanding that he have made his fortune to a better degree in some other more obviously attractive part of Canada. Any time you occupy half a continent, as we do as a nation, I think you have to encourage enterprise in people who reach these outer borders, if they still wish, on the policy of free settlement. If the opportunity to go on, to go out, is not present we could hardly expect people to come into this country to participate in its development.

I do not think we have reached the stability









or the limits of the economy which would justify as a matter of national policy restricting free movement of people within the Dominion.

THE CHAIRMAN: I take it you are very much in favour of the railroad being built?

MR. BONNER: Yes, and I wish more railroads were under consideration. I hesitate always to speak of our own jurisdiction, but there are many roads presently being planned through the north of our province into regions which are not immediately known to produce in dollars and cents a return, but in spite of which great ambitions are associated simply because of the general richness of the terrain which is established.

I do not want to take the time of the Commission to detail these unless you have some particular question in mind. I think it is a useful principle in opening up a country in 1959 and 1960 to realize that you cannot always expect people to go out and pioneer as they did when our grandfathers came into this country and to go overland and live by the axe and some gun powder. You have to provide certain basic sinews of communication into a new region, and given those basic sinews I am sure the enterprise of our people will carry our settlement out over broad aspects.

That is the sentiment which I hold to be true. I do not know to what extent it may be assured









but we have seen, for instance, in our own region, when new roads are laid down in terms of areas which are known to have some potential, people do come in and exert their energies to develop that region.

I realize there are reservations some times associated with people settling on agricultural land and possibly suffering disappointment in their prospects because of the limited usefulness of the region which they may happen to select. Yet, in the balance I think the country is best served by people being allowed to do what they think they like, and our history has so far demonstrated that in the majority of cases they do many useful things so far as national development is concerned.

THE CHAIRMAN: Mr. Bonner, I was asking you this morning about the development of the lumber industry along your railway in British Columbia. On looking at my notes at noon I could not find anything on the amount of lumber that was taken out the year before it was announced you were going to be build a railroad. Could you give me these figures? Perhaps you did this morning?

MR. BONNER: I consulted with my forestry adviser and he tells me we have not shown that in detail, the production prior to and subsequent to the railway development itself. It is apparent from experience along the line in recent years that that volume has gone up and we could possibly take the time









to work that out. This would require some research, but if the Commission would like some detail in that connection we can submit a paper through Commission counsel, for your records.

THE CHAIRMAN: It is something you can do conveniently?

MR. ROETHEL: It won't be easy because we have not the statistics up to five years back.

THE CHAIRMAN: Could you estimate? You are now producing 84 million board feet per year?

MR. BONNER: It is in the little block ---

THE CHAIRMAN: Yes. Now, can you give me any estimate of what it was before the building of the railroad was announced?

MR. ROETHEL: If you want an estimate I would say offhand it was one-tenth before.

THE CHAIRMAN: Your estimate is as a result of the railroad being built the lumber produced has increased tenfold in the area tributary to the railroad?

MR. BONNER: Yes. There was simply no means of transportation prior to the arrival of the railway and this production which Mr. Roethel has estimated coincided with a move from the virtual concentration of our lumbering industry on the coast towards the interior to the point where our interior cut is about 48 per cent of the provincial total now. That is a condition which shows a marked change even in the matter of the last ten years.









THE CHAIRMAN: Let me be sure I have your opinion correctly in my mind: you feel the building of the railroad through there has increased lumber production tenfold in a matter of five years?

MR. BONNER: That appears to be the inescapable conclusion. I know it has been dramatic. You may have been familiar with the Prince George region?

THE CHAIRMAN: No, but I would like to be.

MR. BONNER: If you cast your mind back over the years you will note today a great lumbering industry where even seven years ago it was on a comparatively moderate scale. It is part of the general condition I described of the interior of the province and its lumber resources being brought into production as a change in the picture of our total forest economy.

THE CHAIRMAN: Have you found other industries developing incidental to the increase in the lumber industry?

MR. BONNER: Well, to speak of the development at Taylor Flats itself in conjunction with a gas development, it was necessary to put a scrubbing plant at Taylor.

THE CHAIRMAN: That really was not associated with the lumber industry?

MR. BONNER: No, but I thought you asked me for other developments.

THE CHAIRMAN: I meant incidental to the lumber









industry. Has the development of the lumber industry brought other industry with it?

MR. BONNER: No, I would say not, at this point. The possibility exists, however, now that pulping operations may begin in this part, and it is one of the things under study by investors in the province at the moment. It would not have been possible to study this proposition had the rail not been brought into the region.

THE CHAIRMAN: In drawing a comparison between the two proposed routes, Mr. Bonner, you referred to the fact that the eastern route involves crossing two major rivers. That, of course, means the building of bridges. I think it has been suggested that the proposed western route involves transportation down into and out of the Peace River Valley at Peace River. That is a question perhaps we should keep for Mr. Guest, but if you have any thoughts on it I will put it to you now.

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MR. BONNER: Well, I think one of the most useful points in that connection arises from the railroad brief which I understand has just been filed.

THE CHAIRMAN: I haven't had a chance to read it yet.

MR. BONNER: No. I just mentioned it at this point just in the matter of relative costs.

THE CHAIRMAN: I wasn't intending that you should argue the point. If you had any views of your own, we would like your comments on it while you are here.

MR. BONNER: On the question of river crossings?

THE CHAIRMAN: Yes, how you might compare these two matters.

MR. BONNER: I don't compare the advantages and disadvantages purely in terms of costs, whether you have one or 50 and the point which I suggested tentatively this morning was that there was no real difference between the cost of the two routes. What might be involved, of course, would be the time for the building of the two routes, if time was a factor in getting them under way. I am not aware of any time factor involved. I gather once a time is set there is no strategic reason, for example, which might create a situation of urgency, and therefore I am inclined not to be concerned for the moment with the fact of one or two more bridges on either side except in the matter of cost; and I might concede eventually that in respect of cost in either route there is not too much to choose between them.









THE CHAIRMAN: Would you mind turning back to page 4 of your brief? You have outlined there three contentions of your Government. The first is that the railway should follow the west route in order that the potential offered by the extensive developmental possibilities of the Peace River region may be fully realised.

Yesterday, Dr. Riley made this proposal, I think -- and if I am wrong in outlining it I hope Dr. Riley will correct me; I see he is here -- that if the railway is built from Grimshaw it will encourage the metals from Pine Point and elsewhere in the Northwest Territories to come down into the Peace River area and that will encourage the prospects of a customs smelter, and that in turn will tie in with the development which we hope will take place north west of that.

Do I summarise your position correctly, Dr. Riley?

DR. RILEY: I think so.

THE CHAIRMAN: Is that the same thing you are referring to in your first contention?

MR. BONNER: I think it is part of the general picture which we have for the Peace River region. We have attempted in this brief to look at the regions regardless of the fact that a provincial boundary runs down the middle of it. The region is almost unique in its potentialities, and when you wipe out the boundaries it is quite easy to see what I will say next.

The Peace River block, as a territorial unity,









shares immense resources of the fossil fuels, coal, oil, and gas; it possesses on the Alberta side iron deposits; it possesses on both sides resources of forestry; it possesses both on the Alberta and British Columbia side immense potentialities of hydro electric development.

It is almost impossible to imagine a region more richly endowed, and therefore we have attempted to examine the Peace River area as a unit, notwithstanding it is out-with our jurisdiction, because it is a unit which deserves deliberate attention for development purposes.

The story is brought vividly to my mind in various national campaigns which have occurred, and one in particular in which Mackenzie King, speaking here in Edmonton in the 1920's, having to do with the development of Peace River -- you will remember that people went into the Peace River in those days, not knowing the potentialities which are known now to exist, on the promise of railroad development. It didn't come about until some time afterwards, and in terms of national policy in the late 1920's, Mackenzie King said: "I will make this the spearhead of my national policy" -- to bring connection and development into the Peace River block, which was then, I think, still under Federal control for the most part. Since that time the immensity of the potential of the region has been much more catalogued and detailed that we can say that that was justified.

Therefore, when we see in the Gordon Commission, and it is the considered view of the Government of this









country, that in the matter of 30 years we are going to have about 30,000,000 in the country, I think that it now devolves on us to consider methods to assist in that coming about, and one of the things which will make it happen is, I think, the deliberate intention and development of a region which is so rich as this.

It was with that rather broad vision in mind that this submission was made, and it was made without regard to the fact that the region in question is shared as to jurisdiction by two provinces.

THE CHAIRMAN: Were you present when the speech was made by Mackenzie King?

MR. BONNER: No. Our Prime Minister from British Columbia was at that meeting, and as a young man he was then living in Alberta and was tremendously impressed by the implication of the remarks on the policy which was involved. We have had occasion in British Columbia to refer to the fact of past promises as to Government action; it has, nevertheless, been 30, 40 years before these things came about. Both provinces have done certain things, but with the prospect of a national Government associating itself with still further development in a usable portion of our northland, it occurred that here was one particular case which should be directed to the attention of the national Government because it involved a region already on the list of things promised but not entirely realised over the years which have gone by.









THE CHAIRMAN: Suppose we adjourn for 5 minutes and that would give Mr. Feehan a chance to look over the brief and ask some questions.

We have been following the policy, as you probably know, that Mr. Feehan acts as counsel for the eastern route and then he acts as counsel for the western route.

--- A short recess.

MR. BONNER: Excuse me, my Lord, apparently, although we have referred to it extensively, the order of the Department of Transport Commissioners of 18th September was not formally entered as an exhibit. May I do so now?

THE CHAIRMAN: Thank you very much. I think you have marked on there the paragraph you have indicated to us.

MR. BONNER: The paragraphs quoted earlier today appear on page 25, the second paragraph on page 25, which covers virtually the entire position. It indicates the basic policy, although I think if you had the opportunity to read it, it is of quite general interest in relation to this question.

THE CHAIRMAN: Mr. Feehan, have you some questions to ask Mr. Bonner?

MR. FEEHAN: Very few, sir.

Mr. Roethel, while in McMurray this Commission heard evidence that timber in the east portion would mature about 20 to 25 years earlier than in the west portion. Can you give us your observations on that?









MR. ROETHEL: This doesn't seem to be true.

To talk about growth of timber -- and we heard it today and yesterday -- there is a report, and the further north and east you get the worse it gets, and I don't think there is any doubt from a professional forester's point of view. To highlight this, I have a little map here which shows just in plain colours the volume in acres in Vancouver Island. It is pitch dark, and as it goes this way it gets lighter. Therefore the growth wouldn't be faster in eastern Alberta than west. In my calculations I didn't make a big difference out of it because I thought it was not important enough to say that we should grow 130, 140 years. In the worst areas I used 140 years rotation, and in the Wood Buffalo Park I used 150 years rotation, which agrees with the thesis on forest in Wood Buffalo Park which has been written on the Wood Buffalo timber. So if that is said, it is not true. The only thing I can say is that someone made an error. The species may differ. If you take a spruce, it needs 140 years to mature; ash will take less time, and lodgepole 180 years.

MR. FEEHAN: We have heard many comments to the effect that there are some one billion five hundred million board feet of timber in Wood Buffalo Park which is mature or over-mature. Now, the impression we got -- at least I got -- was that if this wasn't harvested at an early date it would be lost to the economy. Would that be true?









MR. ROETHEL: I would like to refer to the thesis on Wood Buffalo Park. It is suggested there 140 years rotation and not utilizing everything at once. If a tree is over-mature it should be cut, and if it is mature you still have twenty, thirty years. You still have to watch the sustained yield. If you work on a sustained yield basis, then you will take an area of mature and immature and figure out how many years it will take for a fluent supply of timber for the next 150 years, or whatever is the rotation.

THE CHAIRMAN: I think Mr. Hamilton's opinion was that there was a good-sized forest of timber, practically all of which is mature and over-mature.

MR. ROETHEL: In the park -- if I could give you some areas. The park is 11 million acres. According to the thesis, it is mature spruce mainly along the Peace River. Below you have only 100,000 acres mature.

THE CHAIRMAN: Is it all in one block?

MR. ROETHEL: No, two blocks.

THE CHAIRMAN: Two separate blocks?

MR. ROETHEL: Yes.

THE CHAIRMAN: And in those two separate blocks is all the timber mature and over-mature?

MR. ROETHEL: In a block you don't usually get it all the same age, so it could be any age from, say, 80 to 140, which they call already over-mature, depending on the rotation there.

MR. FEEHAN: I might say that the Government in









its wisdom or lack of wisdom was of the opinion that this ought to be harvested fairly rapidly, and they passed orders in council to allow people to go in there and take it out, on the premise, I presume, that it would be lost to the economy if not harvested fairly rapidly.

The point I am trying to make is this, that we have further evidence that there is some likelihood that one of the mills presently operating in that vicinity would be forced to shut down in the event that the railway does not take the east route. That is the reason I was asking about maturity of timber. I submit that the Government must have been of the opinion that this should have been done fairly soon.

MR. BONNER: Which government?

MR. FEEHAN: The federal government.

MR. BALDWIN: The order in council gives 21 years, with an added period of 21 years if they want it.

MR. BONNER: I believe this was a decision of the previous administration which may be reviewed.

THE CHAIRMAN: Are your questions answered now?

MR. FEEHAN: I believe so. I don't think there is anything further I wish to ask at this point.

THE CHAIRMAN: We understand, Mr. Roethel, that you can come back again and we can ask you further questions when we learn a little more about the timber situation?

MR. ROETHEL: Yes, sir.









THE CHAIRMAN: We appreciate that very much.

Thank you very much, gentlemen.

We understand there may be a time when you  
will submit a rebuttal brief?

MR. BONNER: Thank you, your lordship. I  
appreciate the opportunity of presenting a rebuttal  
brief and wish to record the assurance that this re-  
search team of ours is available in future should the  
Commission so desire.

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SUBMISSION OF  
NORTH VANCOUVER BOARD OF TRADE

Appearances:

Mr. M. M. Frazer

President

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THE CHAIRMAN: We have now the brief of the  
North Vancouver Board of Trade.

Yes, Mr. Frazer.

MR. FRAZER: Mr. Chairman and gentlemen, when  
I was in this city of sunshine a few years ago . . .

THE CHAIRMAN: It has changed since then!

MR. FRAZER: . . . this Northern Alberta  
railway was from Edmonton to Dunvegan.

I can remember the huge number of caterpillars  
that came over, and those of us who were born in this  
town well remember when every last vestige of green  
was cut out from Edmonton.

I lived here and then I went to the land of  
the rain.

I watched the young Canadians, and I am very  
pleased to see the manner in which they have made  
their presentations to you. I want to be associated  
with them. But I feel that they are lucky young  
Canadians -- they were born in Canada. When I  
was twenty-eight years old I decided that I, too,  
would become a Canadian, and I appear before you  
as a Canadian.









I will read the brief. The technical matters have been covered by the Province of British Columbia presentation and by the MacGregor Report.

The North Vancouver Board of Trade is pleased to present to the Royal Commission on the Great Slave Lake Railway, this bring outlining its views on alternative routes suggested for the proposed line from northern Alberta to Pine Point, Mackenzie District, N.W.T.

For the purposes of this brief, two proposals only are considered:

- (a) The Western Route -- from Grimshaw, Alta. to Alexandria Falls and thence to Pine Point; and
- (b) The Eastern Route -- from Waterways, Alta. west of Lake Clair and on to Pine Point.

This submission is motivated by a desire to see:

1. That the route chosen will best serve the majority of people presently living in northern Alberta and the land most likely to support the greatest number of people in the future.
2. That the enlightened self interest of the people of British Columbia and of North Vancouver, the terminus of the Pacific Great Eastern Railway, is served without jeopardizing the interests of other Canadians.
3. That the route chosen will extend Canada's









economic frontiers to the best advantage for all the people of Canada.

4. That the route chosen will help our Prime Minister realize for Canada that "greater prosperity with the development of an agricultural programme", which he advocates as being in the national welfare.

The North Vancouver Board of Trade, after perusing various briefs and other technical data, presents the west route as the logical choice.

The following comments are submitted for consideration to support this decision.

For reference, we have used the Government of Alberta's Royal Commission report on the development of Northern Alberta, dated March, 1958, and an economical appraisal of proposed rail routes by the B. C. Government.

For purposes of comparison, the lengths of the alternate routes and cost of construction, which do appear to favour the west route, have not been used, as it is considered that these should not be deciding factors. It is strongly suggested that the major items to be considered are that of population, present and future, and continuing development favouring the agricultural and silvicultural growth of Canada.

Already the Peace River district is the centre of Northern Alberta population, comprising over 61,000 people, living within 110 miles of









Hines Creek. Topographical examination of the proposed west route indicates that it would serve an area eminently capable of supporting a larger number of people than those likely to be settled along the east route. The west route would serve an area of agricultural, forest and mining resources, petroleum and gas wells, with a present population of over 14,000 whilst the population indicated on the east route, north of McMurray, is less than 2,000 although, of course, if Uranium City were included, this figure could rise to approximately 5,000. It would appear, however, that the Province of Saskatchewan's possible development of this area should preclude this factor.

Since it is immaterial which extension is chosen in so far as Pine Point is concerned, the main item under consideration should be the contribution that rail development will bring to the area along the chosen route. It is perhaps a small point that from Pine Point to Vancouver, via the Pacific Great Eastern Railway, is 163 miles shorter. However, this routing would benefit the entire region in a more direct fashion by giving rise to development of an already expanding forest industry there.

Examination of oil and gas development already under way indicates that the west route is favoured entirely, and that considerable freight should result from the incidence of wet or sour gas prevalent in the western section of the Peace River. Added to this









would be the sulphur, liquid hydro-carbons and other petroleum products. Bulk loading facilities are available at the terminus of the Pacific Great Eastern Railway in North Vancouver ready to transfer these products at tidewater to all the great potential markets of the "Pacific Rim". Already work has started on the initial phase of a \$10 million expansion programme complete with deep water dockage.

It would appear that oil and gas development is envisaged in the growth of Northern Alberta and British Columbia and its connection to Pine Point by rail is desirable. Again the west route will serve this purpose better.

The fact that Alaska has now been granted statehood should not be ignored, and it is considered it will add considerable impetus to the growth of the areas along the transportation routes to the north, including even the possibility of a railway line. It is understood that the Alaska Railway Highway Commission, appointed by the U.S. Government, has the situation under examination. It is obvious that if any consideration is given to the extension of railway services from Northern Alberta to Alaska, the western route would provide a more flexible choice of possible connections, including, of course, the possibility of connections with any future lines progressing northward through British Columbia, such as the one proposed through the Rocky Mountain Trench.









At the beginning of our brief, we pointed out that the route chosen for the Northern Alberta Railroad Extension should first serve the people of Canada. Up to this point, we have been itemizing the particular advantages that the western route has within the area. Now is the time to point out the way that railroad development has brought about agricultural and population increases in various parts of Canada.

To examine the map of Canada, it is evident that in developing the northland, railroads throughout the Dominion have played a vital part. For example, the Q.N.S. & L. Railway out of Seven Islands to Knob Lake . . .

That is the one that Mr. Bonner talked about; but there it was ready for development and the railroad was built.

. . . -- the extension of the Canadian National out of Cochrane into Moosonee -- and, one of the most outstanding, the Canadian National Railroad on the Hudson Bay line terminating at Churchill.

We are sure we do not have to enlarge on this theme, because wherever a railroad has extended into the north, population has followed. The lesson we learn is evident. Railroads to the north are a necessity.

The Northern Alberta Railroad, now proceeding out of Edmonton and regardless of the route chosen, will proceed to Pine Point because it is considered a









necessity. At the same time, consider the Pacific Great Eastern railroad moving out of the terminus and port at Vancouver harbour, proceeding to the northland because it was considered necessary, but only as far as Fort St. John. In the eleven months since the Pacific Great Eastern Railroad was extended northward, there have been shipped over 265 carloads of grain and over 690 carloads of cattle and hogs to the terminus in North Vancouver.

THE CHAIRMAN: What were those figures again, Mr. Frazer? How many carloads of grain?

MR. FRAZER: Two hundred and sixty-five; and cattle and hogs, 690. That is in eleven months.

If the railroad proceeding to Pine Point is able to join up with that of the Pacific Great Eastern proceeding to the coast, it will open up a land for expansion, for increased population, for agriculture and do it with one railroad extension rather than separate undertakings. It would appear that the advantage, at least to us, is obvious.

With the construction of the Northern Alberta railroad along the western route, there should be little or no problem to connect up to the present northern terminus of the Pacific Great Eastern Railway. Thus, with the advantages of the western route combined with the expansion of the Pacific Great Eastern Railway and the Northern Alberta Railroad, there will come the opening of a









country eminently suited to agricultural and forest development and a continuing increase in population.

So far we have not stressed what benefits would be received by the people in the region adjacent to the western route by joining up to the Pacific Great Eastern Railway. We have mentioned the ready access to markets in the "Pacific Rim" at tidewater but we can also offer a ready-made market for all the farm produce likely to be produced in the area; a market of 800,000 people concentrated in the southwest corner of British Columbia.

Again referring to the beginning of the brief for the North Vancouver Board of Trade, we stated that after perusing various data and in particular, considering the requirements to be met by the extension of the Northern Alberta railroad, we feel very definitely that the west route is the logical, in fact the only choice, and we are sure, that after weighing the various presentations in front of this Royal Commission, the decision will be obviously the western route. The great majority of people now settled in Northern Alberta and in the Peace River area of British Columbia, as well as those who are extending the economic frontiers from the Peace in a north-westerly direction, are worthy of the greatest consideration. These people want the west route; these people, and all those who come after them, need the west route.









THE CHAIRMAN: You point out in your brief the fact that the terminus of the P.G.E. railway offers port facilities for anything that can come from the Peace River area or north of it.

This question has been referred to several times. There doesn't appear to be much detailed information available as to markets in Japan or elsewhere in the Orient or down the west coast.

Do you know anything about it, or can you give us any help?

MR. FRAZER: Well, I would say that this is a generalized brief and I think that these answers could be given to you by some of the technical people attached to Mr. Bonner's department.

MR. FOUKS: I might say that we are preparing a short brief in answer to the questions in regard to shipments to Japan that arose at an earlier time, and it will be submitted later on.

THE CHAIRMAN: Thank you.

The Commission has no further questions.  
Mr. Feehan, have you any questions?

MR. FEEHAN: No questions.

THE CHAIRMAN: I think that is all, then,  
Mr. Frazer. Thank you very much.

MR. FRAZER: Thank you very much.

THE CHAIRMAN: Is there any further business we should deal with before we adjourn? If not, we will adjourn until a week from Monday morning at 10.00 a.m.  
---Thereupon the proceedings were adjourned until Monday, September 28th, at 10.00 a.m.







**ROYAL COMMISSION**  
**ON**  
**GREAT SLAVE LAKE RAILWAY**

**HEARINGS**

HELD AT  
EDMONTON, ALBERTA

VOLUME No.: 7

DATE:

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ROYAL COMMISSION ON  
THE GREAT SLAVE LAKE RAILWAY

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Hearings of the Royal Commission  
on the Great Slave Lake Railway  
held at the Court House, Edmonton,  
Alberta, at 10.00 a.m., Monday,  
September 28, 1959.

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PRESENT:

MR. M. E. MANNING	Chairman
MR. WALTER D. GAINER	Member
MR. JOHN ANDERSON-THOMPSON	Member

---

MR. FRANCIS M. FEEHAN	Counsel
MR. A. PATERSON	Secretary









SUBMISSION OF  
FARMERS' UNION OF ALBERTA

Appearances:

Mr. E. C. Nelson

President

Mr. W. J. Harper

---

THE CHAIRMAN: Mr. Nelson, you are presenting the brief for the Farmers' Union, are you not, and I think Mr. Harper is with you?

MR. NELSON: Yes. Mr. Harper is to give you all the technical details.

THE CHAIRMAN: Well, we would be very glad if you would go ahead now.

Would you like to read it from where you are?

MR. NELSON: If this is fine with you.  
This is a new procedure for me.

THE CHAIRMAN: One or two have given us briefs from the witness box; I think most of them have read their briefs from the Council Chamber.

MR. NELSON: I think I would prefer to stay here; I think people will hear me. If not, I will speak a little louder.

This is a brief which has been worked up by the Farmers' Union of Alberta, and I think that in anything of this nature the farmers, though possibly not directly concerned with it, certainly indirectly









are all concerned with transportation, both for farm products and other things such as mining and the other things which go with it.

This submission is presented on behalf of the 64,000 members of the Farmers' Union of Alberta.

There appears to be a general agreement that the Northern Terminal of the proposed railway to serve the northern mining areas should be at Pine Point. However, there is a difference of opinion as to the southern terminus. Both Grimshaw and Waterways are prominently mentioned, and we are assuming that one of these points will be chosen.

We believe that the choice of route should depend upon (1) the potential freight tonnage; (2) the possibility of developing industry and agriculture ; and (3) the comparative cost of construction and maintenance of the railway on each of the two proposed routes.

In 1957 the Government of the Province of Alberta appointed a Royal Commission under the Chairmanship of Mr. J. G. MacGregor "to make a complete and thorough study of the conditions and particular requirements of the northern areas of the province, in relation to their present and potential development . . .".

In March of 1958 this Commission presented a 115-page report plus numerous maps and graphs, containing detailed and very complete information









on the productive possibilities of our vast northern areas. Our submission will depend entirely, for factual information, on this report. However, we do take serious issue with some of the conclusions and recommendations submitted by the Commission. These differences of opinion, and the reasons for them, will be developed as we proceed.

#### Potential Freight Tonnage

Minerals: Ores and mineral products, and the necessary materials involved in their production and development, will undoubtedly make up the greater part of the freight tonnage on the proposed railway. The great areas of known mineralization lie mainly north of Pine Point. (See MacGregor Report, pages 68-69 and Map No. 15). This tonnage will, therefore, be common, whichever route is chosen.

However, certain mineral fields exist on each of the proposed routes, and their freight potential must also be assessed. The MacGregor Report lists the following mineral resources and locations in Northern Alberta.

Volcanic Ash: (P.54) East of Lesser Slave Lake -- would not be affected by either proposed rail extension.

Salt: (P.55) All of eastern Alberta from east of Calgary to McMurray -- likewise not affected by the proposed extension.

Gypsum: (P.56) Vast quantities of this









mineral exist at Peace Point and would be served by the proposed Waterways extension. However, vast quantities also exist at Waterways, which is already served by a railway."

Dr. Donald J. Kidd, of the Research Council of Alberta, as quoted in the MacGregor Report (P.56), deals with the gypsum deposits at Waterways as follows: "The most promising bed, occurring between elevations of 285 and 200 feet above sea level in the Alberta Government salt well No. 2 is described by Allan as 'mottled gypsum' between 286 and 237 feet above sea level and 'massive white gypsum' between 237 and 200 feet above sea level.

"From the economic point of view, the location of the gypsum deposit on the (existing) railway would be very desirable. From the combined economic and geological point of view, the best location for finding a mineable deposit of gypsum would be in the vicinity of the mouth of the Christina River. A shallow test well in this area would stand a good chance of finding a mineable bed of gypsum of reasonable purity at a moderate depth."

The report also states - p. 57 - "the deposit on Peace River appears to be the most promising." "Unfortunately, the Peace River and the Salt River deposits are within the boundaries of the Wood Buffalo Park."

The mouth of the Christina River is on the









rail line, near Waterways. It would appear, therefore, that a supply of gypsum is already available, and that no rail extensions are presently needed to place it in a marketable position.

Fireclays: (p.57). The report states that "fireclays suitable for a stoneware have been reported along the Athabasca River between Bitumont and Waterways." In other words, less than 50 miles from the present railhead.

Sulphur: (p. 57). This is generally a by-product of oil and gas wells. As such, it is being presently produced in several parts of Alberta and British Columbia. Enormous quantities can be produced if and when needed, from the McMurray Tar Sands -- which are already served by a rail line.

Oil and Gas: (p. 57). "The rich energy resources of Northern Alberta hold considerable promise of being the key which will unlock its other treasures. With oil and gas liberally sprinkled over its western half, Northern Alberta is in an enviable position from the standpoint of energy." The Grimshaw extension would run through this western half.

It can readily be seen, therefore, that only the Grimshaw extension can be of value to the oil and gas industry. No petroleum deposits have been found on the proposed Waterways extension, and it is believed that such deposits do not exist there,









due to the geological formation. (See MacGregor Report, p. 58.)

Iron Ore Deposits: (Pages 52-53-54)

These deposits are all located in the north-western part of the Peace River area, and can be effectively served by the proposed Grimshaw extension. The extent of this mineral field is not yet known, but one deposit contains an estimated one billion tons. These ores are low grade, and some doubt exists as to their economic value at present. However, in many areas they are near enough to the surface to allow for open-pit mining. Samples containing 33 per cent iron have been found, which compares favourably with the Mesabi ores, which have been worked when the iron content has been as low as 29 per cent. (MacGregor Report - p. 59.)

It is apparent therefore that the potential mineral tonnage originating south of Pine Point is much greater on the proposed Grimshaw extension because it serves proven gas and oil reserves and proven iron deposits, in an area not presently served by rail. The Waterways extension, on the other hand, will serve no new mineral areas along its entire route other than the gypsum deposits at Peace Point. There is no need for this development since adequate supplies of gypsum are available at Waterways, as already pointed out, and in any event the deposits lie within Wood Buffalo Park -- a non-commercial area.









THE CHAIRMAN: Mr. Nelson, could we interrupt you for a moment? You have said in the first part of that paragraph that the iron ore deposits up near, north of Pine Creek, aren't they, are already served by a railway, or will be served by a railway. But are they not fairly close to a railway now? That is, isn't the iron ore along the route that you advocate as close now to a railroad as, say, some of those things that you have referred to on page 3 that are close to the present railway going as far as McMurray?

MR. HARPER: The rail extension. You are speaking of the Worsley-Hines Creek line which runs just south of the Clear Hills area where some of these iron deposits are reasonably close to there. However, as we understand it, these deposits also run a considerable distance north of there, and we believe that a railway going up in the general area of Keg River would possibly be closer to the northern end than the southern end of the Hines Creek area.

THE CHAIRMAN: How close would the southern end be?

MR. HARPER: That depends on the exact route of the railway.

THE CHAIRMAN: How far from the highway, if it went by the highway?

MR. HARPER: I haven't checked that. I









can't give you the exact figure as to that.

MR. NELSON: Again I think it is a case of not having been properly looked into. I think they are still surveying<sup>ing</sup> and still drilling for iron ore deposits in that area. I don't think the exact extent of it has been determined.

THE CHAIRMAN: Is there drilling going on now?

MR. NELSON: There was drilling, and it was discovered that the deposits were not as rich in iron content as it was originally thought, and this was the reason for stopping at that time -- no possibility of getting it out and not rich enough.

THE CHAIRMAN: We have had a brief, a letter written to us by the Premier Steel Company. As I recall it, they said that they owned these iron ore deposits, and yet that company ~~that~~ owned these iron ore deposits advocates the railway being built along the east rather than the west because it was felt that the iron ore deposits which are there appear to be close enough to a railway, that there doesn't appear to be a reason for building another one along the proposed route. I suppose you haven't gone into that aspect of it?

MR. NELSON: No, we have not, and I suspect also that this mining company would know more about these mining deposits than we would have access to, anyway.

Agriculture: The possibilities of agricultural development on the Waterways extension are









practically nil. The MacGregor Report (p.40) lists the soil of the area between Waterways and Wood Buffalo Park as "pasture and woodland -- doubtful arable." The park is, of course, not available for development.

On the other hand the rail extension, if built from Grimshaw, would traverse I.D's 138, 146 and 147 (Map No. 9, MacGregor Report). The Report estimates that at present there are over 700,000 acres farmed in this area, and that the total land available for settlement is another  $1\frac{1}{2}$  million acres. (MacGregor Report, p.83). Thus we have, on the Grimshaw route, roughly  $2\frac{1}{3}$  million acres of arable land.

We have taken as a basis of comparison Crop District No. 14, of the old Crop District divisions which were used in Alberta prior to 1958. Crop District 14 is the area adjacent to Athabasca, extending south to approximately Legal. The arable acreage in this district is estimated at  $2\frac{1}{3}$  million acres -- almost identical to the area which would be served by the Grimshaw-Pine Point railway. The type of soil, rainfall, and other natural features are very similar in each of these districts. It is reasonable to assume, therefore, that the productive potential of the Grimshaw-Fort Vermilion area is equal to that of District 14 -- the Athabasca area.









The monthly Commercial Livestock Report, published by the Marketing Service of the Department of Agriculture, Ottawa, shows that in 1956 the following number of commercial livestock were shipped from District 14:

Cattle and calves	39,721
Hogs	188,384
Sheep	6,046

This represents 3740 carloads of livestock.

While it is recognized that a large part of our livestock is presently trucked to market, this would not be so true of livestock raised in the northern Peace area, since they would have to come from 400 to 600 miles to the Edmonton market, and shippers would be more inclined to ship by rail if possible.









THE CHAIRMAN: May I stop you for one moment, Mr. Nelson.

COMMISSIONER GAINER: Mr. Nelson, there is one point that comes to mind here, and that is as to the extent to which trucking of livestock is carried on within the Grimshaw area now. Would you have any knowledge of the proportion of livestock which is now moving to market by truck from the Grimshaw area and north?

MR. NELSON: No, I do not think we have.

MR. HARPER: No, we have not. I think, sir, the next paragraph may, possibly, add something to that thought that the Commissioner has.

COMMISSIONER GAINER: We will pick it up in a moment, then.

MR. BALDWIN: There are two livestock trains on Fridays and Saturdays which are composed solidly of livestock cars that come out of the North country - - largely the Grimshaw and Peace River areas.

THE CHAIRMAN: Two trains a week?

MR. BALDWIN: Yes.

MR. FOUKS: I might add that there are 200 cars a week going to the West Coast from this area.

THE CHAIRMAN: Let me get what Mr. Baldwin said.

MR. BALDWIN: There are two livestock trains that are made up from Hines Creek and Peace River. I cannot give you the exact number of cars, sir, but from personal observation there is a









great number of cars made up during that period from Grimshaw.

COMMISSIONER GAINER: Is my understanding correct that there is a large amount of trailer-truck traffic coming out of that area?

MR. BALDWIN: Not from north of Grimshaw - - at least, not in the last year. There is not a great deal from north of Grimshaw.

COMMISSIONER GAINER: Not necessarily from north of Grimshaw, but, generally, from the Peace River area.

MR. BALDWIN: I would say from the Valley-view and Grande Prairie areas. It is a question of roads. But there are only about 15 or 20 miles of road which is not paved in the Grande Prairie section, and you do see the odd trailer coming a distance of, say, 250 or 300 miles.

COMMISSIONER GAINER: And that movement is established?

MR. BALDWIN: There is some movement, but I would not say that it is very large. I have travelled continuously on that highway, and very rarely do you see a large trailer of cattle or hogs coming into Edmonton.

THE CHAIRMAN: Now, Mr. Fouks, you say there is a lot of traffic - -

MR. FOUKS: Yes, 200 cars a week coming out of Alberta going to the West Coast. I have not been









able to obtain the percentages yet area by area, but I hope to have that information by this afternoon. That is what goes to the West Coast to feed Vancouver and the lower mainland." That is just livestock and it has nothing to do with dressed meat. I would say there are approximately 100 cars going east per week out of Alberta. That would also include Calgary and the areas adjacent to Southern Alberta as well as Edmonton and the Northern areas we are now discussing.

THE CHAIRMAN: You say 100 cars a week?

MR. FOUKS: They go east. There are 200 cars west and 100 cars east, approximately.

THE CHAIRMAN: From where?

MR. FOUKS: From Alberta.

THE CHAIRMAN: From the Peace River area?

MR. FOUKS: No, from Alberta by rail car. Of that approximate number of 200 - - I have not got the exact breakdown, but I hope to get it this afternoon. You brought up the question of trucks and I was trying to show that the rail car is still a most important factor in the movement of livestock.

THE CHAIRMAN: I see. This is for the whole of Alberta?

MR. FOUKS: Yes, Mr. Chairman.

THE CHAIRMAN: Can you get that information for us?

MR. FOUKS: Yes, I hope to have it this afternoon.









MR. NELSON: I think, possibly, there is another factor here which may eventually enter into it, and that is the possibility of the northern rail route through British Columbia. If a rail route in Alberta made it possible for these northern shipments to go into B.C., including a lot of the cattle shipments that normally go to British Columbia coming around by Edmonton, then I think it would be fairly obvious that at least that much, and more, would go by a shorter route to Vancouver, and it might eventually mean that a bigger portion of this livestock coming from that area might go down that way if a rail route was available to it.

THE CHAIRMAN: What type of rail route did you have in mind to Vancouver - - or, which rail route did you have in mind?

MR. NELSON: The one connecting up with the P.G.E.

MR. HARPER: Yes, north of the river.

MR. NELSON: This is just in the realms of possibility, but if it became available it seems to me that this would be a factor.

COMMISSIONER GAINER: But since that connection is made now - - this is perhaps the figure that we are going to get from Mr. Fouks later on, namely, the portion that is going over the P.G.E. at the moment, but our concern at the moment is to establish whether or not the potential freight movement would, in









fact, move by rail, and whether some of it might continue to move by other forms of transportation.

MR. FOUKS: That is why I just have the bulk figures, but I will get the breakdown.

MR. NELSON: That is true, and this, again, would hinge on whether roads are built along the railroads up in that area. Shall I continue?

COMMISSIONER GAINER: Yes, if you please.

MR. NELSON: "On the other hand, if processing facilities were made available in the Peace River area, trucks might haul a large percentage of the live animals, but the processed meat would no doubt become rail freight, since much of it would have to be sold on outside markets.

The 1955-56 Report of the Board of Grain Commissioners shows that for the 10 years 1946-55 an average of 4,119 carloads of grain were shipped from Crop District No. 14.

Grain moves to market almost entirely by rail so the railway would be assured of this volume of freight. They would also be assured of a large tonnage of Agricultural machinery and supplies needed to operate this 2 1/3 million acres of farm land, and to provide the needs of the thousands of farm families.

The MacGregor Report, (P.94) dismisses this potential freight tonnage as follows:-

"This (Grimshaw) railroad would traverse the best agricultural land that remains in the North









but the need to stimulate agricultural development in the next few years is open to question."

Our comments are (1) This railroad is not being built with only the "next few years" in mind, and (2) the present world population explosion, which creates 47 million new mouths to feed every year, may in the near future severely tax the food producing capacity of the world's agricultural lands.

This should be kept very clearly in mind.

THE CHAIRMAN: Mr. Nelson, is there anything more you can say to support that proposition? For instance, can you give us any figures about what has happened over the past ten years with regard to the consumption of grain in the North American continent, or the world as a whole?

MR. NELSON: I am afraid we have not gone into that in much detail. Again, our financial resources are such that we have not been able to spend too much time gathering this data. We are depending more on logic than on figures in regard to this particular area at the moment.

COMMISSIONER GAINER: There is one question which I will put to you this way, and ask for your comment, Mr. Nelson: From the Canadian point of view is the problem likely to be so much of producing more to sustain the larger population the world over, or is our problem likely to be, and has it not been in the past, a question of trade essentially - -









of exporting our commodities, and being willing to take something in exchange? In other words, given an explosive population the world over does it necessarily follow that markets for Canadian agricultural products will open up satisfactorily?

MR. NELSON: Well, I think probably that this is something that only the future can tell. Certainly it does not mean that we have found better trade possibilities, but I think it has also been recognized - - I have not any particular figures to quote to you, but it has been recognized that by 1980, which is not so terribly far away, Canada is going to have quite a time in feeding its own population. This, of course, excludes grain. I think it will be recognized also that as you increase the production of livestock in various grain growing areas you reduce the amount of land producing grain, and, therefore, any area that can go into production and produce it reasonably cheaply will be needed to produce that grain which will, in turn, produce the livestock and the other components of the feed. I think this is probably the first thing we have to think about.

The other thing, of course, is long-term trade and the opening up of trade areas. I am not prepared to say this is possible. I think, going back to the Atlantic congress in London this year, at which I was privileged to take part, of the 17 nations within the NATO Alliance there was recognition by everyone that









some means of opening up trade barriers between all of the free nations of the world was of great importance if we were to expect to continue existing with the way of life that we have set up for ourselves. Realizing that, all of these nations recognized that this is the most important thing at the moment. It would seem to me that surely before too long ways and means of opening up a trade between these countries would become more of a reality that it has been in the past. That is what I am basing my thoughts on.

THE CHAIRMAN: Those pious hopes have been expressed for a good many decades at international gatherings, have they not?

MR. NELSON: Yes, I think that is correct, but, again, I would like to point out that possibly we are moving to a place where this recognition is being brought closer to governmental circles than it has been in the past. That is, we are getting public opinion closer to governmental circles, and as such we can hope that they will have some effect. It is, perhaps, a pious hope of a kind, but I think the world has to recognize these things eventually, or be snowed under, having regard to the things that we have developed in the past.

THE CHAIRMAN: This may be outside the scope of our inquiry, but can you give us any more evidence to support the idea of greater free trade amongst the nations?









MR. NELSON: Well, again, the evidence would be, I suppose, more of a pious hope than anything else, but, recognizing that - - but this, again, goes back to some of the things that came out of the Congress. The only possibility of bringing about more world trade is to increase the standard of living in the so-called under-developed countries. Just how far this will be carried on, of course, only time will tell, and also to be considered are the feelings of the nations of the world, but I think as people become more conscious of this factor they will find ways of increasing development in this area, and, of course, as their standard of living increases they become more able to trade with the nations in the higher developed areas. This, again, is, as I say, pious in its scope, but I think it is one of those things that have to be recognized.









THE CHAIRMAN: I think it was Mr. Baldwin who raised the question in Peace River, that there is another reason for hoping there may be need for increase in the agricultural land. You were going to see if you could get anything else on that, Mr. Baldwin?

Over the past twenty years, a great deal of the land which was used to grow oats and other livestock feed for the horses drawing agricultural implements is now being used to grow wheat, because they have ceased to use horses and now use machinery. On that basis there has been a great deal more land go into the production of grains for human consumption, which is an increase that had been, although very great, rather imperceptible because there is no increase in the amount of land cultivated, but a great increase in the amount used to grow grain.

MR. NELSON: That is certainly correct.

This is something we have known for quite a number of years, but, again, as you increase the production of livestock for food purposes you gradually start using up some of the surplus grain for that purpose. Here again, in the Peace River area, I think probably one of the best oats and barley growing areas in Canada, this becomes a better livestock food and a cheaper means of converting grain to meat products, and probably as cheap as anywhere in the Dominion.

THE CHAIRMAN: We still want lots of grain









for livestock that we are going to eat, but we don't want much for the livestock which pull agricultural implements.

MR. NELSON: That is true.

THE CHAIRMAN: There has been some considerable increase in the amount of grain used for human food, but do you know whether there is going to be a continued demand for grain which may mean more land will be required, or we may be satisfied by more careful development of the land we have now cultivated?

MR. NELSON: I don't expect there will be any increase in the amount of grains required for human consumption in the western world, but certainly we have evidence of a tremendous increase in the requirements of wheat and barley, particularly in Japan, which I think could be cultivated with Japan and very well become the greatest importer of food consumption grains from Canada in the world. This we have conclusive evidence of. I don't have the references which I can give you right offhand.

MR. HARPER: Thirty-eight million last year of wheat to Japan.

MR. NELSON: Yes, and certainly Japan was interested in a tremendous increase in this type of food.

COMMISSIONER GAINER: On that very point, does it seem likely to you that we can proceed in the future on the basis of this level of export,









having in mind the tremendous balance of trade deficit we have been running with Japan?

MR. NELSON: I certainly hope so.

COMMISSIONER GAINER: You think this trade deficit would provide no obstacle?

MR. NELSON: Well, certainly, if we could increase the export of grain products to Japan it would have the tendency, of course, to lower our trade deficit in the world; but, again, it becomes a question of trade as to whether we can buy any Japanese products, and this becomes an economic problem, and as such I don't know whether I am prepared to go into that at the present time or not. From the agricultural standpoint, the trade that we could develop with Japan would be to the benefit of Canadian agriculture in that it would mean, probably, cheaper clothing and some of the component parts of agricultural costs. I am not prepared to debate this at this time, because it goes further than that; it goes into Canadian economics and requires more study than we have been able to do.

THE CHAIRMAN: Well, there are large agricultural surpluses in Canada.

MR. HARPER: I wonder if I may make an observation there, Mr. Chairman. The Gordon Report states that by 1980 the expected population of Canada will be approximately 27 million, which is 10 million more than we presently have; well over a









50 per cent increase. At the present time the production of meats, eggs and the high protein foods of that sort could not possibly meet the requirements of that population. We are going to have to step up substantially the production of meats, eggs, butter and particularly milk, if this population of 27 million comes into being by 1980. That, in itself, will absorb a great deal of our agricultural surpluses, either by the direct use of land or by the use of land to produce grain which will be used to produce eggs and milk and pork and that sort of thing. Assuming this estimate to be correct, we have need for a very great expansion of certain forms of agricultural products in Canada within the next twenty years. Our surplus is very light now in those products.

THE CHAIRMAN: Have you the reference in the Gordon Report?

MR. HARPER: I can't give you the page. It is frequently quoted in our various agricultural publications, and so forth.

THE CHAIRMAN: Would you mind looking it up for us?

MR. HARPER: We will be very happy too, sir.

THE CHAIRMAN: We were faced with this situation in considering the possible agricultural development in the area north of Grimshaw: those who advocate the western route have presented the









argument that you have presented this morning. On the other hand, those advocating the eastern route point out the agricultural surpluses, and they also point out there is a lot of land populated in Canada now which might, with a little more careful cultivation, produce a great deal more than it does now. There is also a great deal of land around the area of Lac la Biche, and some land in the Peace River area, which is already serviced by railroad. Unfortunately, we are faced with the two contradictory statements with very little in the way of facts to support them. If you could give us any help on that, we will be very grateful for it. We are faced with generalities.

MR. BALDWIN: Mr. Chairman, if I just may make a comment there: the Government has seen fit to bring into effect the South Saskatchewan dam project, and mainly, amongst other reasons, in the belief that they will require in that area and in western Canada generally a certain amount of the livestock produce and the livestock which may be generated and may be one of the end products of that scheme. In arguments I have heard presented at Ottawa and elsewhere, that is one of the reasons behind the fact that today that project has been decided upon as being feasible and necessary because of the fact that over a period of fifteen or twenty years from now we may require









larger areas of our country where the livestock product may be developed.

If I may explain to Mr. Nelson the point you referred to, Mr. Chairman, I told the Commission, Mr. Nelson, that over the last twenty years the information I had from the United States Department of Agriculture was that approximately 70 million acres of land, which in the past had been used to grow feed for horses and mules, which were then used as motor power on farms, had now been turned into the growth of the products of the farm -- fibre or food for human beings; but that has come to an end. That 70 million has been exhausted, and for the future we must look somewhere else. That is the point I made, and it is a moot point, as the Chairman pointed out, that from now on in the United States they no longer have that vast reservoir of 70 million acres, and they must look elsewhere for new production.

MR. NELSON: I think that is correct, and I think, going back into world trade, here again this is something I think should be taken into consideration. At just about the time this began to happen in western agriculture, and the trend from horse power to mechanical power created a surplus of grain, just at that particular time was when France came into the picture as an exporting nation by direct subsidization of their farmers, and today France exports as much wheat as Canada as a direct result.









I cannot help but feel that this is one of the things which eventually will come to an end as well. I don't think France will continue to subsidize wheat production, and we can possibly look to the possibility of France becoming less and less a factor in the export of wheat. The two factors coming in together had a tremendous impact on Canadian production, but I think the trend is now going to be the other way. This is a general observation.

THE CHAIRMAN: You say you "think" it is: can you give us any evidence in support of your suggestion?

MR. NELSON: The evidence, of course, is the gradual lessening of the subsidization of the French wheat production. They started out on the basis of approximately \$4.80 a bushel, when they first started to subsidize French wheat production. They have now gone down to -- I think the subsidization at the present time is closer to \$2 a bushel.

THE CHAIRMAN: Can you get us that material?

MR. HARPER: Yes, we can get it. France is not included here, but it is something less than \$2, because I have a list of all those nations which subsidize their wheat producers to \$2 or more. So, the French one must be less than \$2. However, I can get that for you.

THE CHAIRMAN: You might discuss that









with Mr. Baldwin, because Mr. Baldwin told us in Peace River that he thought there was some grounds for United States subsidies being reduced. These are very interesting things, but I put the problem to you, and if there is anything else you can give us, we will be grateful.

MR. BALDWIN: I will be glad to get together with Mr. Nelson.

MR. NELSON: The reason I can see these things from a different angle than some people is because of the discussions with these people in London at the Congress, because this was very definitely one of the things discussed there, and it seems fairly obvious there is a change in this whole aspect of subsidization, particularly in the European countries.

THE CHAIRMAN: You are interested in this, aren't you, Mr. Bishop?

MR. BISHOP: Yes, Mr. Chairman, very much so.

THE CHAIRMAN: Would you mind checking the figures for Mr. Bishop?

MR. BISHOP: Mr. Chairman, we would also like the opportunity of developing the question as to what extent the South Saskatchewan dam project will either add to the surplus created by the Grimshaw area, or otherwise remove the need for it.

THE CHAIRMAN: Well, I don't know; we are









getting a little far afield.

MR. BISHOP: The question has been brought up by Mr. Baldwin.

THE CHAIRMAN: I take it Mr. Baldwin is saying that somebody is interested in the Fort Saskatchewan dam and thought that more agricultural products would be saleable. You are saying that somebody has arrived at that conclusion and you hope we will follow that?

MR. BALDWIN: Well, that was government thinking, and assuming government thinking is correct -- which I don't always do ---

THE CHAIRMAN: Well, if we can get the evidence upon which that decision was formed, it would help.

COMMISSIONER GAINER: May I raise one other question as an extension of this: I would like to hear your reasoning in connection with this line of development: if there is the greater concentration of livestock production generally over the next, let us say, twenty years, does it follow that the Grimshaw north area, particularly the new areas that are opening up, will be more or less concentrated in livestock development? In other words, will the livestock production become more concentrated in the areas closer to existing markets so that the fringe areas concentrate on grain production, or is it likely to be the other way round?









MR. NELSON: Well, again, cattle are dependent to a large extent on fodder, and this becomes a factor. In the areas such as we have within a reasonable radius of the City of Edmonton it becomes more costly to produce fodder because it is something that takes more land, and as land becomes higher priced fodder becomes higher priced. Therefore, a cheap means of producing fodder for livestock is going to be a factor.

There is one thing I would like to bring to your attention here, and that is we are not advocating that we build a railroad at this particular time to serve any agricultural area. We are asking, on the assumption that if a railroad is being built, then we think it should be a consideration. This, basically, is our main reason for this, and also for using it more in general terms than getting down to specific figures. Possibly we made a mistake in not doing that, but it does appear to me to be a factor in the overall picture.









MR. NELSON: We will gather all specific evidence we can, and I think, together with Mr. Baldwin, we can probably come up with something fairly - -

THE CHAIRMAN: There may not be anything, we are not suggesting there is, but if there is anything we would be very glad to have it.

MR. NELSON: "Timber Resources: The MacGregor Report (Map No. 10) shows the timber resources of Northern Alberta. The entire area is divided into 4 classifications, according to the potential board feet of merchantable timber per acre. From this map it is apparent that the Waterways extension could, at best, traverse about 70 miles of 3rd rate timber stand and 12 miles of 4th rate timer stand, before entering Wood Buffalo Park. From there on no commercial logging is allowed.

On the other hand, the Grimshaw extension would traverse 100 miles of 2nd class timber stand, 80 miles of 3rd class timber stand and 70 miles of 4th class timber stand - 80 miles of poor to fair stand on the Waterways route as compared to 250 miles of poor to good stand on the Grimshaw route. This would indicate far more merchantable timber on the Grimshaw Route.

We are not in a position to know whether timber from these far Northern areas can be profitably merchandised on the world's markets, but if it can, either now or at some future time, the Grimshaw route









will be able to supply it in far greater quantities than will the Waterways Route.

Population: Present & Future: The MacGregor Report (page 89, and map No. 16) gives the present population as follows:-

Region 2 - in general the Keg River - Ft. Vermilion area - population in 1956, 4,300. By 1987 - population 30,000.

Region 5 - Northeastern Alberta - present population 300. By 1987 - 11,000.

It is apparent, therefore, in which area the development is expected to take place. The population along the Grimshaw route is now almost 15 times that along the Waterways route and is expected to remain substantially greater.

Construction Costs: The estimated cost of the proposed Railroad over either route is over \$60 million. (MacGregor Report - P.94). The Report states that the distance from Grimshaw to Pine Point is about 430 miles, while from Waterways to Pine Point is just under 400 miles. It adds, "Offsetting this shorter distance, however, is the fact that from McMurray north two major bridges - one over the Peace and the other over the Athabasca will have to be constructed if this route is taken." "The railroad from McMurray would cost less because it is 30 miles shorter. But the bridge over the Peace would probably cost \$5 million while the one over the Athabasca would be considerably









less, possibly half as much."

If the cost via Grimshaw is \$60,000,000 for 400 miles, this means an average cost per mile of \$150,000.00. The Waterways route, being 30 miles shorter, would therefore cost \$4 1/2 million less. However, to save this \$4 1/2 million would entail the expenditure of \$7 1/2 million on two bridges, for a total increase of \$3 million, (which is 5 per cent of the costs) if the Waterways route is chosen.

The Report also stresses (p.94) that these two bridges should be built so as to accommodate highway traffic. We would point out that there would appear to be little need for a highway from Waterways to Pine Point. No appreciable settlement exists along this entire route and there is little likelihood of there being any local traffic, since most of the area is park-land. Furthermore, there is no highway from Lac la Biche to Waterways. On the other hand, the MacKenzie Highway has been in use for some years and serves some 4300 people between Grimshaw and Hay River.

If the Commission envisaged the building of a highway from Lac la Biche to Pine Point, a distance of nearly 600 miles - this is an additional cost which has already been met on the Grimshaw route.

The MacGregor Commission recommends, and repeatedly infers, that the railway should be built from Waterways. Their reasons are as follows:-









(1) Service to Uranium City: "--- such a railway must provide access to Uranium City." (P.95). (P.94) "The railway would serve as the supply route for Uranium City and the points now served by water transportation via Lake Athabasca." We are unable to understand this reference. The proposed railway would not come within 100 air miles of Uranium City. By water from Peace Point down the Peace River, and along Lake Athabasca, is roughly 150 miles. How can this railway be said to serve Uranium City?

At present the water route to Uranium City, from Waterways down the Athabasca river, is approximately 200 miles. The suggestion seems to be that by starting from Peace Point, 50 miles of water transport can be saved, on freight going to and from Uranium City. This is quite true, but to make this saving requires an extra freight haul of 200 miles on the proposed rail route from Waterways to Peace Point.

We are quite unable to see how the proposed rail extension can in any way improve the service to Uranium City, some 150 miles away. It could only add appreciably to the already costly freight haul.

(2) "It would open up Alberta Pre-Cambrian and Paleozoic areas for exploration." Map 3 shows these areas. The Pre-Cambrian area is in the extreme Northeast of the province. It is bisected from S.W. to N.E. by Lake Athabasca, giving ready access by water. It is bisected from North to South, north of the Lake,









by the Slave River, which also gives ready access. The Athabasca River runs close to its western border on the south end, giving ready access to that area. The proposed railway on the other hand, will be from 30 to 50 miles away from the Pre-Cambrian area, and for exploration purposes would be of little value as compared to these well-travelled water routes.

The Paleozoic area of Alberta lies almost entirely within Wood Buffalo Park, and is therefore not a commercial area. It is true that this entire area would be traversed by the proposed railway from Waterways - 200 miles through the Park without any local freight traffic whatever.

(3) "It would open up some timber areas, which, due to increased accessibility, would be more readily developed." This is true of either route, and the best timber, as we have shown, is on the Grimshaw route.

(4) "It would pass the Athabasca oil sands development at Mildred Lake."

Waterways, the present terminus of the railway is well within the famous Athabasca Oil Sands area. Until such time as they are effectively developed, this present line will serve the area adequately so far as rail facilities are concerned. If and when oil production takes place in any significant volume, from this field, it will no doubt be transported by pipe lines. The problem in developing this resource is









production methods, not transportation.

To summarize: The Grimshaw route offers

- (1) more tonnage possibilities because of (a) Iron ore and petroleum fields which it alone can serve;
  - (b) Substantial agricultural production, the possibilities of which do not exist on the Waterways route;
  - (c) More and better timber resources than exist on the Waterways route.
- (2) A much larger (present and future) population than the Waterways route.
  - (3) Lower construction costs than the Waterways route, because of two very costly bridges needed on the latter.

We therefore submit that the facts speak for themselves and that the proposed extension should be built from Grimshaw.

Respectfully submitted on behalf of Farmers' Union of Alberta".

THE CHAIRMAN: Mr. Nelson, we will have a five-minute adjournment now, and I think we may have a few questions we would like to ask you.

Mr. Feehan is our Commission Counsel. Mr. Feehan has been following his policy: When somebody advocates the western route, he acts as Counsel for advocates of the eastern route, and vice versa. So he may cross-examine you for a few minutes.

We will resume in another five minutes.

--- A short recess









THE CHAIRMAN: Mr. Feehan, have you some questions to ask of Mr. Nelson?

MR. FEEHAN: I have a few, sir.

THE CHAIRMAN: Mr. Nelson, you and Mr. Harper are together. If you feel that you would like to ask Mr. Harper any questions, feel free to call on him, or anyone else that you wish.

MR. FEEHAN: Mr. Nelson, some mention has been made in the previous brief submitted of the Crow's Nest Pass rates. I suppose that you would be working on the assumption that, in the event that a railway were to be built north from Grimshaw, these rates would be effective for the new line?

MR. NELSON: Yes, I think that is correct.

MR. FEEHAN: In that event, it is quite possible that the railway would be adding another subsidy to the agricultural produce from that area. Would that be true?

MR. NELSON: I am not in a position to say whether it is true or not, but seeing that the railroads have never yet, up to this point, been able to present facts to prove or to substantiate the assumption that they are, in effect, losing the revenue from moving grain, that it is not sufficient to provide a reasonable return - until such a time comes I would have to say that I do not think this is so.

MR. FEEHAN: If I gather you correctly,









you are not convinced that the railways are losing money under the grain rates.

MR. NELSON: No.

MR. FEEHAN: Are you referring now to the export rates?

MR. NELSON: To the export rates; that is always assuming that exports always remain the same and the volume the same.

MR. FEEHAN: In the volume, the submission by the Western Farm delegation to the Government, reference is made to various other countries of the world, and particular reference to subsidies in excess of \$2.00. Could you estimate the direct or indirect subsidy which the Canadian Government is making to the farmer now per bushel?

MR. NELSON: Would you repeat that?

MR. FEEHAN: I was wondering if you could give us an estimate of what, in your opinion, by way of direct or indirect subsidy the Canadian Government gives per bushel to the farmer.

MR. NELSON: Actually there is no subsidy to my knowledge directly to grain production as such. It is true that the Federal Government gave to the supposedly grain producers of western Canada a 40 million dollar subsidy a year ago. If it would be applied to the bushels of grain produced in western Canada it would amount to 6 million bushels. I would have to take some time to figure that out. But that,









is the only subsidy to grain in western Canada. The other subsidy is a small subsidy to help to defray the cost of freight to feed in Canada.

MR. FEEHAN: We have received information in previous briefs that it is very expensive to truck grain from the Keg River area into the railhead at Grimshaw; as a matter of fact, it is also prohibitive, we are led to believe. Do you think that the farmer - -

THE CHAIRMAN: We have evidence as to the exact figures, haven't we? - 50 cents a bushel.

MR. BALDWIN: It starts at 50 cents at Fort Vermilion and dwindles down to Keg River.

THE CHAIRMAN: That is trucking to Grimshaw?

MR. FEEHAN: Trucking to the railhead.

Do you think that the farmers in the northern Peace River area would be satisfied, in the event that the railway was built in that area, to pay something more to freight their grain and their produce, something more than the present rates which are in force in Canada?

MR. NELSON: I don't think there would be any justification to ask them to pay more freight. From their standpoint, at the present time it might be said that any reduction in the cost of getting grain out would be of some benefit to them. I can't see that there would be any justification for charging them any more than the normal freight rates.









MR. FEEHAN: Do you think it would be fair to put it this way, that at the present time they are paying 50 cents. Would they not have a real advantage in cutting it to 25 cents?

MR. NELSON: Certainly from the economic standpoint there certainly would be an advantage.

MR. FEEHAN: But you don't feel it would be fair to place them under that onus?

MR. NELSON: I don't think so.

MR. FEEHAN: I would like to refer you to page 38 of the City of Edmonton's Chamber of Commerce brief, and in particular to a statement on page 38. At the top of page 38 it says: "Even if the area north of Grimshaw can be made to produce double the present amount of grain, the result will be merely to double the loss to the railway if the present rates are maintained".

Have you any comment on that remark?

MR. NELSON: That is working on the assumption that the railroads are losing money on their grain shipping, and, as I have said before, we are not prepared to accept that. Until the railroads can come up with facts and figures to prove that they are losing money on that type of transportation, the answer would have to be the same.

COMMISSIONER GAINER: Mr. Nelson, I presume it wouldn't be up to the farmers themselves or the shippers to say whether it was moved under the grain









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or export rate; that would be up to the shipping company who received the grain.

MR. NELSON: Well, of course, the Canadian Produce Board has jurisdiction in that, and I can't visualize them not doing so.









COMMISSIONER GAINER: Can you explain to us, or suggest, in what fashion or in what way it would be determined? I am speaking of the rate, whether it is a domestic rate or an export rate, at which the grain would move out from Keg River to the west coast or to the east?

MR. NELSON: There would be no way of actually determining the freight on grain once it is in the hands of the Canadian Wheat Board. After all, the Canadian Wheat Board is the only buyer of wheat, oats and barley in Western Canada. Therefore, as soon as it is delivered to the elevator, regardless of whether it is the elevator in Edmonton or Calgary or Grimshaw or Keg River, that becomes a part of the Canadian Wheat Board's total value of grain. Then the Canadian Wheat Board would in turn sell the grain wherever the market was determined, and it might require the grain that was loaded in an elevator at Keg River, for instance, for a specific market in Vancouver, and it might also take it from any other part of the country to be shipped there, and the freight would be charged to all the grain that the Canadian Wheat Board had marketed.

At the present time there is a differential as between areas, but it is a very small differential. I think it is 4 cents between Edmonton and Winnipeg, for instance, as far as shipments to Fort William are concerned. This is part of the total









grain that is sold for export. The total grain that is sold for domestic purposes within the country, of course, is shipped at the higher freight rates, but this does not reflect to any individual producer. The freight costs are taken off the total that the Canadian Wheat Board handles.

COMMISSIONER GAINER: Let me put this question to you: What would you say the grain movements out of this country north of Peace River would go out as? Would it go out under the export rate, or some indeterminable figure in between there depending on the proportion that moves? Is that it?

MR. NELSON: Well, it would depend entirely on where that grain went. I cannot visualize its being anything else than going into the normal channels of trade. That is, it might go to Fort William or it might go to Vancouver, and whichever case it might be the Crow's Nest Pass rates would apply. Any additional cost in the way of freight would come off the total amount of money available to pay out the Canadian Wheat Board's final payments, and it would be shared amongst all the people in Western Canada, including these people. Now, I cannot visualize any way in which you can differentiate. You cannot take one carload out of Keg River and ship it to a buyer in Vancouver. That is just not done in the Wheat Board's business.

MR. FOUKS: Excuse me, Mr. Chairman, but









we have Mr. Guest here who is a very well known expert on this topic. If you wish to discuss it now I believe he can answer that question to your satisfaction.

COMMISSIONER GAINER: I am interested in it, but I am not sure that now is the best time. Perhaps we can come back to that in a moment.

THE CHAIRMAN: Would it be convenient for Mr. Nelson and Mr. Guest to discuss this during the noon adjournment, and perhaps between them they can tell us what they think about it then. Is that satisfactory to you?

MR. NELSON: Yes.

MR. FEEHAN: Mr. Nelson, it has been suggested that bringing livestock from the Peace River to Edmonton to market by truck can be performed in twenty-four hours, whereas by train it might take two or three days. It has also been suggested that the increase in truck rates is offset by the shrinkage caused by the livestock having to sit in the cars for three days. Would this be true?

MR. NELSON: It would be true if this statement were absolutely correct. I do not think the statement is correct. It may have been correct in the past, but I understand the railroads have stepped up their service quite extensively, and the last report I had was that the livestock coming in from the north is very seldom on the cars









more than twenty-four hours.

MR. BALDWIN: That is right. It usually gets in on Sunday night. It is from Saturday night to Sunday night.

MR. FEEHAN: In that event would it be cheaper to ship by rail from Keg River than to bring the livestock in by truck to, say, Edmonton?

MR. NELSON: I would have to say that I think it would be cheaper -- that is, from the standpoint of normal rail costs. Mind you, the trucks have come down in their rates when competition becomes more effective, and the same thing happens to the railroads. Now where the costs of each one comes into the picture I am not prepared to say.

MR. FOUKS: There would be the extra costs of transshipment from truck to rail at Edmonton.

MR. FEEHAN: Mr. Fouks has mentioned the transshipment in the event that the livestock was brought in by rail. There would obviously have to be transshipment at one point or another, so I do not think it matters.

MR. FOUKS: There would not have to be transshipment from rail car to rail car. They would stay in the same car. That is my point.

MR. FEEHAN: You have also mentioned in your brief, Mr. Nelson, the gypsum deposits in the









Waterways area. Have you any specific knowledge of the quality of those deposits?

MR. NELSON: I am going to ask Mr. Harper to answer that one.

MR. HARPER: The only thing we have, sir, is, as we reported in the second paragraph of our brief, that we have taken the information from the MacGregor Report.

MR. FEEHAN: You mentioned elevations of 200 to 285 feet above sea level. I was wondering if you were talking about the removal of the overburden. Would you explain why you have mentioned these levels.

MR. HARPER: The mention of the levels is there simply because it is a quotation from Dr. Allan's report.

MR. FEEHAN: They have no particular significance?

MR. HARPER: No, it was merely a quotation from him.

MR. FEEHAN: I have no further questions.

THE CHAIRMAN: We have no more questions, gentlemen, but we would appreciate it if you would come back at two o'clock after discussing this question of freight charges with Mr. Guest.

MR. NELSON: I think we can do that.

THE CHAIRMAN: Thank you very much, gentlemen.









SUBMISSION OF  
CITY OF EDMONTON,  
EDMONTON CHAMBER OF COMMERCE  
and  
CALGARY CHAMBER OF COMMERCE

Appearances:

Mr. C. W. Clement, Q.C.	Counsel
Mr. L. G. Grimble	
Mr. Archie Gordon	Freight Rate Consultant

Calgary Chamber of Commerce

Mr. Fane Polley	Chairman, Special Activities Committee
Mr. H. R. Hammond	Manager

City of Edmonton

Mr. F. J. Mitchell	Mayor
Mr. D. B. Menzies	Commissioner
Mr. J. M. Tweddle	Commissioner
Mr. E. E. Bishop, Q.C.	Counsel

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THE CHAIRMAN: Mr. Clement, you are going to give us the brief of the two Chambers of Commerce and the City of Edmonton?

MR. CLEMENT: Yes, sir.

Mr. Chairman and members of the Commission, we appreciate the opportunity of making this submission to the Royal Commission on the Great Slave Lake Railway, with the hope that the information contained herein will be helpful in aiding the Commission to form a decision.









Because of the time element involved, we are submitting this brief in two parts; Part One being a summary of the significant factors relating to the alternative routes; Part Two to be an elaboration of the factors covered in Part One.

Sir, I am not sure of the practice you are adopting. I have, unfortunately, been absent from the earlier sittings of this Commission in Edmonton. Part One has been filed with the Commission, and that is the part from which I am reading. Part Two is an extensive compilation of supporting material ---

THE CHAIRMAN: Is that ready now?

MR. CLEMENT: Yes, it is ready, but, in some respects, perhaps, it is still in rather rough shape. This is it, sir. May I file it as an exhibit?

THE CHAIRMAN: You do not have more than the one copy?

MR. CLEMENT: No, and I doubt whether it would be physically possible for us to furnish you with more than one copy.

THE CHAIRMAN: Perhaps we had better leave it for the moment, but as you go along will you let us know where the material in Part Two is relevant?

MR. CLEMENT: Yes, I was going to take that opportunity. I think that practically every paragraph containing factual information in this









brief is supported by material in Part Two, and as we go along and come to the more salient points I will pause to direct the Commission to where that might occur in Part Two.

THE CHAIRMAN: Perhaps you would do that so that we may make a note in our own copies of Part One, and so that we will know where to go for the supporting material in Part Two.

MR. CLEMENT: Yes, I am sure we can develop some method ---

THE CHAIRMAN: Perhaps you can let us know as we go along.

MR. FOUKS: Is there any possibility of our getting a copy of Part Two, Mr. Chairman?

THE CHAIRMAN: Well, it can be filed. Will that be satisfactory, Mr. Fouks?

MR. FOUKS: Is there a possibility of the City giving us a photostatic copy of it?

MR. BISHOP: I think the various parts of Part Two will emerge as a series of exhibits. Maybe I should not say this at this time, but the reading of Part One with the supporting information in Part Two is going to take more than today's sitting with the result that we will probably have to continue on to Thursday. I think we could probably arrange to have extra photostatic copies made in the meantime.

MR. FOUKS: Thank you, Mr. Bishop.









THE CHAIRMAN: Perhaps you and Mr. Fouks can discuss this at noon and work out something satisfactory.

MR. BISHOP: Yes.

MR. CLEMENT: The City of Edmonton and the Edmonton and Calgary Chambers of Commerce are of the opinion that a railway constructed northerly from Waterways would be in the best interest of Canada as a whole, and Northern Development in particular.

The consulting firm of Stanley, Grimble, Roblin, Ltd., Edmonton, was retained to examine objectively from an engineering and economic standpoint all the pertinent factors relating to the location, construction and operation of the proposed railway.

Mr. Chairman, I thought it would be of value to the Commission to have before it the qualifications of this firm, and I have prepared a sheet. Perhaps you might not wish it to be put in, but you could at least have it before you, and you will know that we have consulted what we consider to be the best available here.

THE CHAIRMAN: I do not think there is any question raised as to the qualifications of this firm.

MR. FOUKS: No.

THE CHAIRMAN: Perhaps you might like to give us the detail in a general way.









MR. CLEMENT: The qualifications are extensive, sir. Perhaps I should just file it. It would take more than a little time to read it out.

---EXHIBIT NO. 52A: Document containing qualifications of Stanley, Grimble, Roblin Ltd., Edmonton.

MR. CLEMENT: On the second page of the submission there is restated the Terms of Reference which have guided us in the preparation of this submission, namely:

"to inquire into and report upon the respective merits of the alternative routes which might be followed by a railway line to be built from northern Alberta into the southern portion of the District of Mackenzie, Northwest Territories, for the purpose of providing access to and contributing to the development of that portion of the Territories tributary to Great Slave Lake."

We have endeavoured to focus our attention on the area encompassed by these Terms of Reference. It has not always been possible, of course, to ignore areas, other than those which may be tributary, through which one or other of the alternative routes might pass, and the benefit to either one of these alternative routes through the construction of a railway there. However, I am on sound ground in telling you, sir, that we did endeavour to focus as









much as we could on the area which is relevant to  
this inquiry.

May I proceed, then, to a description of the  
area under consideration. I think, sir, with your per  
mission, at this stage I might ask Mr. Grimble, who  
had the major portion of the task of preparing this  
submission, to assist me by referring to the various  
maps. I am now about to discuss what we conceive  
to be the area which we are concerned with, and if  
it suits the Commission's convenience we might point  
that area out on one of the maps which are before you  
so that it may be readily followed.









MR. CLEMENTS: "Description of Area Under

Consideration: The Terms of Reference given the Commission, and the physiographic features of northern Alberta indicate that only two starting points need be considered for the railway. They are: Waterways, Alberta, and Grimshaw, Alberta, both points being on the Northern Alberta Railway. The alternative routes to Great Slave Lake would extend from Waterways along the eastern side of northern Alberta and from Grimshaw along the western side of northern Alberta.

The Terms of Reference require the Commission to determine which of these two routes will contribute most to the development of that portion of the Northwest Territories tributary to Great Slave Lake. That is, the area in the District of Mackenzie bounded on the west by the Valley of the Mackenzie River, on the north by the Arctic Ocean, on the east by a line joining Bathurst Inlet to Artillery Lake and Selwyn Lake and by the south boundary of the Northwest Territories. You will notice, Mr. Chairman, Selwyn Lake, I think, is rather marginal; I think it may be a little out of the Northwest Territories, and yet it is tributary in the view we take. The Arctic ports now served through Great Slave Lake would also be included as shown on the map facing this page. The Commission is also required to consider the respective merits of the two routes and thus the territory tributary to them is also shown on the map facing this page.









Thus the benefits to the areas contiguous to the southerly originating points of the two routes are secondary to the development of the District of Mackenzie and should only be considered inasmuch as they contribute to tonnages on the railway.

A. Physiography and Geology of the District: Map No. 3 - by this we are referring to the maps which are made part of the submission and which you will find at the back, but which, in their enlarged form, are now before you on the wall - shows the topography and the general geological structure of the area under consideration. The westerly boundary is approximately the west edge of the Interior Plains, the line of contact between the sedimentary rocks of the Interior Plains and the Pre-Cambrian rocks of the Canadian Shield runs roughly through the middle of the area.

The south boundary is a line joining Waterways and Grimshaw and the area extends to the Arctic Islands in the north.

The Great Central Interior Plains which form the west half of the area under study, vary in width from 400 miles in the latitude of Fort Vermilion to 200 miles in the latitude of Wrigley, N.W.T. These plains extend for a length of about 1300 miles. The Central Plains overlies the Pre-Cambrian rock which dips gently from the east to the west. That is, there is a down grade going westerly. Between the surface of the Plains and the Pre-Cambrian rock are horizontal or







gently dipping beds of unaltered sedimentary rocks of Palaeozoic Age which extend eastward to the Canadian Shield. In the Mackenzie Valley the Pre-Cambrian strata are in turn overlain by Cretaceous and Tertiary sediments forming a potential source of oil and gas. Along the west edge of the Canadian Shield have occurred most of Canada's mineral finds, see Map No. 3.

The portion of Northern Alberta covered by the study, except for the extreme northeast corner, is part of what is called the Alberta Plain and is intersected by the Valleys of the Hay, Peace and Athabasca Rivers. The slope is gradual from the southwest to the northeast.

The west boundary of the Canadian Shield crosses the Northwest Territories in a northwesterly direction nearly down the middle of the area under consideration in this study. It extends from a point east of Waterways near the Alberta-Saskatchewan boundary, passes through Fort Smith on the Alberta-Northwest Territories boundary, passes through Fort Rae on the Northwest Arm of Great Slave Lake and strikes northwesterly to the McTavish Arm of Great Bear Lake.

Metallic mineral occurrences are wide spread over a belt extending northwesterly from Lake Athabasca to Great Bear Lake. The Pine Point lead-zinc deposit on the south shore of Great Slave Lake lies just beyond the western fringe of the Canadian Shield.

Preliminary geographic and reconnaissance









mapping have covered only a fraction of the area of the Canadian Shield dealt with in this study, and prospecting has been confined mainly to the more accessible portions. However, deposits of gold, radium, antimony, silver, copper, lead, zinc, tungsten, iron, nickel, cobalt, titanium, barite, beryllium, molybdenum, bismuth and other metals have been found.

COMMISSIONER THOMPSON: Might I ask there, could you indicate what area on the Pre-Cambrian Shield has not been prospected up to date? You said the accessible areas only.

MR. CLEMENTS: I will ask Mr. Grimble to give some indication of that.

COMMISSIONER THOMPSON: Could you indicate some specific area that has not been prospected.

MR. GRIMBLE: I am fairly familiar with the northeast corner of Alberta, but none of these maps are large enough to show it in detail. However, the only portion of the northeast corner of Alberta that has been prospected is along the canoe routes, such as the Taltson River, or along the edges of the lake where there is access by aeroplane. Apart from that, this country is comparatively untouched. This is the area in Alberta within the Shield. These long rivers are the canoe routes, and these are the rivers that have been looked into and prospected - or, the edges of the lakes have been prospected. Otherwise it is not intensively prospected - it is not prospected at all in terms of









- well, when you talk of not intensively and intensively  
- -

COMMISSIONER THOMPSON: I thought they were  
prospecting in there in 1930 and right on through?

MR. GRIMBLE: There was a big claims rush  
in there when the uranium balloon came through, but this  
is a little different. A claims rush is a little different  
matter from a prospecting rush. It is a case of  
going in and staking without even looking, and this was  
done mainly along the lakeshore.

MR. FOUKS: Where is that in relation to  
Pine Point? How was Pine Point found? I am sorry,  
Mr. Chairman, but I cannot follow the prospecting of that  
eastern area.

MR. GRIMBLE: Pine Point is not in the Pre-  
Cambrian. We were discussing intensive prospecting  
of the Shield.

MR. FOUKS: Is Pine Point in the Shield?

MR. GRIMBLE: No, it is not.

MR. FOUKS: Well, map number 3 is not  
necessarily correct.

MR. GRIMBLE: It is along the west edge of  
the Shield. Pine Point could be termed along the west  
edge of the Shield. It is just outside the border of  
the Shield.

MR. FEEHAN: The minerals at Pine Point  
are not in Pre-Cambrian rock?

MR. GRIMBLE: No.









MR. FEEHAN: They are lying in the sedimentary rock?

MR. GRIMBLE: Yes.

COMMISSIONER THOMPSON: I still haven't got my question fully answered. We have had several briefs dealing with a terrific number of mineral discoveries that have already been made in that northeastern side of Alberta. We have had reports of I don't know how many different types of minerals that have been found there. How did they find them if they haven't prospected?

MR. GRIMBLE: They have prospected, but not to any degree. They found many deposits with a minor amount of prospecting. I can give you illustrations of intensive prospecting. There are towns in the Shield that were built on top of mineral deposits, and it was not until some years later that the town itself was found to be on a mineral deposit.

COMMISSIONER THOMPSON: Which ones, for instance?

MR. GRIMBLE: Marmora, Ontario is built on a mineral deposit, and the town was there for years before they realized. I am just illustrating that when we talk about intensive propsecting, you could be living right on top of it.

COMMISSIONER THOMPSON: How many years do you visualize before we will get it intensively prospected to that extent? If you figure the advances in geology from the time Marmora was established









as a town - nobody was thinking of anything but farm produce in those days. It is pretty hard to find any place in the Pre-Cambrian where somebody has not been there before. I was hoping I might find a small little place where nobody has been.









MR. GRIMBLE: I might illustrate it this way, that there are firms spending upwards of half a million dollars a year at this time looking in this area, this general area. One individual firm could be spending as much as half a million dollars looking for mineral finds.

COMMISSIONER THOMPSON: I know of one firm spending 8 million dollars.

MR. GRIMBLE: We are saying that it hasn't been extensively prospected.

COMMISSIONER THOMPSON: You mean prospecting. All you can use - - all you can do is use a pick and shovel; these seismographic and geophysical methods haven't been employed.

MR. GRIMBLE: I would say that even the pick and shovel methods haven't been covered and geophysical surveys haven't been carried out at all.

THE CHAIRMAN: Mr. Grimble, are you saying that there are several firms spending half a million dollars presently in that area?

MR. GRIMBLE: Yes, there are.

THE CHAIRMAN: Could you outline the area where that money is being spent?

MR. GRIMBLE: I would have to refer to a letter. This is a - -

MR. CLEMENT: Would you like the letter read, sir?









THE CHAIRMAN: Yes. Anything you can give us on that we would be glad to hear.

MR. GRIMBLE: I have two copies, sir, photo-static copies.

MR. CLEMENT: This is a letter from International Mine Services Limited, dated September 24th, 1959.

"International Mine Services Limited is now directing a number of companies in a large scale mining exploration program in the Northwest Territories. These companies are Indian Mountain Metal Mines Limited, Murky Fault Metal Mines Limited and Snowdrift Base Metal Mines Limited, and are under the sponsorship of Mr. J. H. Hirshhorn.

This program entails the systematic aerial prospecting of 80 thousand square miles of the Northwest Territories. Geological mapping has been used along the electromagnetic, magnetic and scintillometer surveys in this exploration. Where results warranted further investigations, surface work and diamond drilling were done. Approximately \$500,000.00 had been spent on this program.

This exploration has been underway for four years and is of such a scope and scale that it will continue for a few more years. Many occurrences of mineralization of copper, nickel, lead, zinc, gold and uranium, and other metals and minerals have been examined. Many more still remain to be checked.









To date a number of significant occurrences particularly of copper and nickel have been found, but more development work is required before estimates of tonnage and grade and tonnage can be made on these deposits.

The main Indian Mountain Metal Mines Limited, properties, 12 miles north of Great Slave Lake has, with a limited amount of drilling to a depth of 650 feet, an ore reserve of 1,070,000 tons of ten per cent zinc, .89 per cent lead, 3.57 ounces of silver to the ton. Cadmium is also known to occur in the ore. Improved transportation facilities in the Territories would hasten the development of this property.

It is the firm belief of the above companies that a railway from Waterways via Fort Smith to Pine Point, will encourage the exploration, development and discovery of important mineral concentrations in an area which has considerable potential for economic ore occurrences".

Is your Lordship clear as to what area is being dealt with in this letter, or would you like Mr. Grimble to point it out?

MR. GRIMBLE: This area in here.

THE CHAIRMAN: That is around the east end of Great Slave Lake.

MR. GRIMBLE: Yes, the north-east end of Great Slave Lake, and this area here.

THE CHAIRMAN: And the Indian Mountain, that









is north of Great Slave Lake.

MR. GRIMBLE: Yes.

THE CHAIRMAN: We are very interested in any discoveries south of Great Slave Lake. Have you any information of any discoveries in Lake Athabasca?

MR. GRIMBLE: This is a larger scale map. I must say I am not a geologist. This is second-hand information, up to a point. The strip shown here in this colour - I have heard it called the green stone belt - the nickel deposit in Northern Manitoba. This is an area of high potential. I have another larger-scale map which covers this area in particular. But this is an area of great potential. I might say that this has been so little prospected, the geological work has been so scant, that there could be large areas which are not shown in a map of this scale, nor on the larger-scale map.

MR. CLEMENT: Would you like the larger map, sir?

THE CHAIRMAN: Yes. We would like to see whatever we can.

MR. BISHOP: I think we should clarify that Mr. Grimble is talking about the darker overlay, not the pink area - the green overlay.

MR. GRIMBLE: This appears on more than one map.

THE CHAIRMAN: Perhaps we had better identify these maps. The one you have been talking about can









be marked as an exhibit.

MR. GRIMBLE This is a geological map of Western Canada.

THE CHAIRMAN: We will have that marked as exhibit 52 (b), and the one that you have just tacked up will be 52 (c).

---EXHIBITS 52 (b), 52 (c), 52 (d): Maps.

COMMISSIONER THOMPSON: Might I ask a question? Are there any areas on Thompson Lake which are marked as never having been covered by geological survey? Are there any areas which geological surveys have not covered on that map? They have covered it geologically, I take it.

MR. FOUKS: Mr. Chairman, would you have any objection if we marked on this exhibit the areas discussed in this letter?

THE CHAIRMAN: Yes. Can we get the exhibits marked? 52 (b) is the large map and 52 (c) and (d) are the two that are put up there together, aren't they?

MR. CLEMENT: Yes, sir; and it might be well to have the letter which I have read specifically marked, too, in case it might be referred to.

MR. GRIMBLE: This is a small part of the area between Great Slave Lake which is just shown on the top left corner, and Lake Athabasca which would be down here.









THE CHAIRMAN: What you are referring to is exhibits 52 (c) and (d).

MR. GRIMBLE: And locating them on the larger-scale map, they would sit in here. Nonacho Lake is there.

THE CHAIRMAN: How would it be if we adjourned till 2 o'clock, and that would give you a chance to mark the maps, Mr. Grimble?

We will adjourn until 2 o'clock.









---On resuming at 2.05 p.m.

THE CHAIRMAN: Is Mr. Nelson here? Mr. Nelson was going to discuss something with Mr. Baldwin.

MR. HARPER: I am sorry, Mr. Chairman, but Mr. Nelson asked me to present his apologies. He was hopeful of cancelling an appointment he had in Lethbridge this afternoon, but he was unable to do so.

THE CHAIRMAN: Are you in a position to tell us what we were wanting to know?

MR. HARPER: Yes, I will try.

THE CHAIRMAN: Or, would you like to leave it until tomorrow?

MR. HARPER: It makes no difference.

MR. BALDWIN: I did not proceed to discuss the matter with Mr. Harper. Mr. Nelson told me he had his appointment in Lethbridge, and I did not do anything further in regard to it.

THE CHAIRMAN: Would you like to leave it until tomorrow?

MR. BALDWIN: Yes, if that is all right with Mr. Harper.

THE CHAIRMAN: We are likely to have a busy day tomorrow. Would it be possible to leave it until the day after tomorrow?

MR. BALDWIN: Yes. Perhaps Mr. Harper could draw up a memorandum in his office and let me have it. Would that be satisfactory, Mr. Harper?









MR. HARPER: Yes, that would be satisfactory.

THE CHAIRMAN: Very well. Mr. Clement, before we go on, it has been pointed out to me that we did not mark as an exhibit the material which you have as Part Two of your brief. You wanted to make some extra copies?

MR. CLEMENT: I understood that that was A, but perhaps I was mistaken.

THE CHAIRMAN: No, the brief was marked as the exhibit.

MR. CLEMENT: Then I misunderstood the situation.

THE CHAIRMAN: How would it be if we were to leave that instead of marking it as an exhibit now? You could then make any copies you wish to make of it, and then remind us that it has to be marked as an exhibit and put it in in that way.

MR. CLEMENT: Yes. Although it is called Part Two by the time we have entered all the exhibits as they come up you will have Part Two in the form of a series of exhibits. If you mark Part Two as an exhibit then the exhibit will be only the cover that we have used. With deference to counsel, I am inclined to think that perhaps we can spare the Commission a reference to each individual item in it, and just touch on the salient ones, so it may be desirable to mark at the end as an exhibit what is









left and what has not been touched on specifically.

THE CHAIRMAN: Very well; or, should we mark as an exhibit now the copy of this letter from the International Mine Services Limited.

MR. CLEMENT: I understood it was marked, but perhaps I am mistaken.

MR. FOUKS: Here is the original, Mr. Chairman.

THE CHAIRMAN: It will be Exhibit 52E.

---EXHIBIT NO. 52E: Letter dated September 24, 1959, from International Mine Services Limited.

MR. CLEMENT: Perhaps Mr. Paterson can tell me what exhibits are now marked, so that we may have our records straight.

THE SECRETARY: Exhibit 52 is Part One; 52A is the professional qualifications; B, C and D are the three maps; and E is this letter.

MR. CLEMENT: Mr. Chairman and Commissioners, before the noon adjournment it was suggested that the area depicted on C and D be marked on a larger map, and that has now been done. The boundaries are shown in red here, and I would suggest in order to make the record understandable that perhaps this larger map ought now to have a designation so that it can be conveniently referred to.

THE SECRETARY: It will be F.









MR. CLEMENT: I do not know how to describe it except that it is a large map.

THE CHAIRMAN: Suppose you describe it as the original map of which a copy is marked as Map 2 in your brief.

MR. CLEMENT: Yes, it is Map 2 on a large scale. Perhaps we should take a moment so that Mr. Reporter and all of us will understand it ---

THE SECRETARY: They are marked on the back.

MR. CLEMENT: Yes. C and D are outlined on F.

---EXHIBIT NO. 52F: Large map showing on its face the areas in Exhibits 52C and 52D in red.

MR. CLEMENT: There is one other point which I would like to suggest now. There has been some interest shown in going into more detail in respect of the geography of some portions of these maps. Actually, in our submission we do touch on the question of mining, which involves geology, at a later stage, and if it is agreeable, sirs, perhaps the questioning on these matters of geology might appropriately be deferred until we touch on the section relating to mining which is on a subsequent page in the brief. At that time perhaps we could do it altogether, and we are hopeful that we will be able to have some qualified









person to give some further evidence on it.

THE CHAIRMAN: So that we can make a cross reference here, Mr. Clement, which is that part which deals with mining?

MR. CLEMENT: I think it commences at page 40 -- yes, it is in the middle of page 40.

THE CHAIRMAN: Page 40 is where you outline in detail the argument you have referred to.

MR. CLEMENT: Yes, where we intend to go into, with a little more detail, the matters which Commissioner Anderson-Thompson was raising. Exhibit E refers to certain physical areas. Would it be of convenience to have those shown to the Commission, roughly, on the map?

THE CHAIRMAN: Yes, if you wish, or, perhaps, we can deal with all of this together.

MR. CLEMENT: Deal with it at the appropriate time?

THE CHAIRMAN: Yes, when we get to page 40.

MR. CLEMENT: Then, if I may I will continue reading the brief from page 6 which relates to climate. The following describes the climate in general terms of typical points in the territory under consideration -- and then there is a kind of a table showing the mean annual temperature, the mean July maximum temperature, the mean January minimum temperature, the mean annual snowfall, the mean annual rainfall, and the mean annual total









precipitation of Inuvik, Yellowknife, Fort Resolution, Fort Vermilion, McMurray and Grimshaw.

The difficulty with the table, sir, is that at the time of its preparation we did not have in our possession the meteorological data to fill in those blanks. We have now obtained a table from a Dominion Government publication which furnishes the information lacking here together with other climatic details, and I think, sir, I would like to tender this now as an exhibit.

---EXHIBIT NO. 52G: Document entitled "Table 1. Some climatic factors, particularly those affecting plant growth at Fort Smith, Fort Resolution, Hay River, Fort Simpson and Fort Vermilion.

MR. BALDWIN: Does that just supplement that table? Does it show what is missing on page 6?

MR. CLEMENT: No, Mr. Baldwin, there is further information of a nature relating to the agricultural possibilities of these various points. For example, there is shown the duration of the frost-free period in days which has a bearing on agricultural growth. It is our opinion that there is a substantial area of arable land around Fort Resolution which is within the area that is within the purview of this Commission, so that Fort Resolution is included as a matter of comparison, say, with Fort Vermilion and Grimshaw.









THE CHAIRMAN: Would you tell us what the significance of this exhibit is, Mr. Clement, in addition to what you have already said?

MR. CLEMENT: I would think, sir, the significance is this, that some mention has been made, as I understand it -- and, again, I am somewhat at a disadvantage -- some mention has been made of the agricultural features of the land lying to the south of the area under consideration -- that is, south of the north boundary of Alberta leading to Grimshaw -- and that the agricultural interests in that strip might be served by a railroad in addition to the highway. Since the Commission is concerned with the economic development of this District of Mackenzie we thought it might be appropriate to point out that within Mackenzie itself, and in an area which would be served by the eastern route, there is a substantial portion of land around Fort Resolution which appears to offer as much possibility of agricultural use and development as the land along the Grimshaw route, so that this area within the territory can help to support a population that might develop in the area in so far as agricultural products are concerned.

THE CHAIRMAN: Have you any details of it? At Fort McMurray we were given some evidence which would suggest that there have been some grain crops grown very satisfactorily around Fort Resolution --









at least, I think it was Fort Resolution.

MR. FOUKS: Fort Chipewyan.

THE CHAIRMAN: Yes. I think it was only on an experimental basis, but it was successful.

MR. CLEMENT: I did hear something to that effect, sir. May I have just a moment? Mr. Grimble has produced to me a publication of 1957 by the Canadian Department of Agriculture entitled "Reconnaissance Soil Survey of the Slave River low land in the Northwest Territories of Canada."

THE CHAIRMAN: What is the title of that?

MR. CLEMENT: "Reconnaissance Soil Survey Slave River low land in the Northwest Territories of Canada." Now, it might be of assistance if Mr. Grimble reviewed this, and was able to direct your attention to the more salient parts of it. We can file it with you if you wish.

THE CHAIRMAN: Or, could you do both?

MR. CLEMENT: Yes. Perhaps we can bring this aspect forward again when we are dealing with our section dealing with agriculture. I hope by that time to have this summarized for you.

THE CHAIRMAN: While you are doing that would you consider these further things, that at Fort McMurray it was said that there was a lot of gardens which have been grown successfully along the edge of the Athabasca River. I gather there have not been too many of these because there have









not been too many people living there, but it was said that there seems to be no reason why some agricultural development cannot take place up there. The weather problem did not seem to disturb anybody, but we do not know anything about the soil up there. I do not know whether there is any information that is available on that.

MR. CLEMENT: This report seems to bear on it.

THE CHAIRMAN: That is in the Northwest Territories?

MR. CLEMENT: Yes.

THE CHAIRMAN: The area I am talking about was in Alberta.

MR. CLEMENT: Oh, yes. I do not know whether our provincial Department of Agriculture has extended its surveys that far east yet, but we can find out.

MR. FOUKS: I have been to the Department, and they have no up-to-date information on the area at all -- that is, the area north of Fort McMurray.

THE CHAIRMAN: Well, we will come back to that when you are dealing with agriculture. In the meantime Exhibit G outlines the climatic conditions.

MR. CLEMENT: Yes, thank you, sir. As a matter of explanation, and to save confusion, Exhibit G is a page from this reconnaissance soil survey that









we have just spoken of.

MR. BALDWIN: I wonder, Mr. Clement, if that reconnaissance soil survey will be coming in later when you come to the agricultural aspect?

MR. FOUKS: May I look at it?

MR. CLEMENT: Well, we can file it now, if you wish.

THE CHAIRMAN: No, we will wait until you come to it.









"C. Existing Transportation Systems:

The area under consideration is presently served by the following transportation routes. The western portion of Alberta north of Grimshaw (a point on the Northern Alberta Railway) is served by the Mackenzie Highway (No. 35) which is now being reconstructed jointly by the Alberta and Federal Governments to a high standard, heavy-duty highway. This highway extends from Grimshaw 381 miles to Hay River Town on the south shore of Great Slave Lake. A highway extends from Enterprise (28 miles south of Hay River) to Fort Providence on the Mackenzie River (which it crosses by ferry) and is under construction from this point to Fort Rae and Yellowknife around the west end of Great Slave Lake.

The easterly portion of Alberta from Waterways (which is the end of the present Northern Alberta Railway Line) is served by water transport for about five months of the year via the Athabasca River, which flows northward into Lake Athabasca. Over this system, water transport serves Uranium City on the north shore of Lake Athabasca and Fond du Lac and Stony Rapids at the east end of Lake Athabasca. A main water transport route also continues from Lake Athabasca down the Slave River to Fort Fitzgerald, where a 25 mile portage carries materials to Bell Rock Harbour below Fort Smith for trans-shipment down the Slave River to Great Slave Lake. This water transport system supplemented by shipments from Hay River Harbour serves the Mackenzie









River Valley from Great Slave Lake to the Mackenzie delta and along the Arctic Coast from Tuktoyaktuk to Cambridge Bay. Water transport from Bell Rock Harbour and Hay River Harbour also serve Fort Rae, Yellowknife and points on the northeast arm of Great Slave Lake such as Fort Reliance. The Great Bear Lake area is served by water transport from Fort Norman on the Mackenzie River, via a portage and the Great Bear River.

THE CHAIRMAN: Just a moment, is there a portage between the Mackenzie River and Great Bear Lake?

MR. CLEMENT: A 16 mile portage, I am told.

THE CHAIRMAN: There is no water transport through there at all? It used to go right through the rapids, but now they are taken off, and there is a portage.

MR. CLEMENT: Mr. Grimble tells me that would be true for the smaller vessels, but probably the larger vessels are not able to do it.

THE CHAIRMAN: Thank you.

MR. CLEMENT: The territory tributary to Great Slave Lake considered in this study is also served by air transport making use of hard surfaced airports at Fort Smith and Yellowknife.

Mr. Chairman, there may have been a typographical error here: it should start off, "The City of Edmonton and the Chambers of Commerce









of Edmonton and Calgary...".

"GENERAL: The City of Edmonton and the Chambers of Commerce and Edmonton and Calgary have commissioned a factual study to compare the merits of the two alternative railway routes as outlined below. For the purpose of this brief, the route originating on the N.A.R. at Grimshaw will be called the Western Route and the one originating on the N.A.R. at Waterways will be called the Eastern Route.

1. Engineering Aspects of the Alternative Railway Routes: On Map No. 2 are shown diagrammatically the two alternate routes. The Western Route, beginning at Grimshaw, roughly parallels the Mackenzie Highway but remains east of the Hay River whereas the Highway crosses to the west side of the River.

I should point out, gentlemen, that in doing this we were not being presumptuous; we were not finally locating a railway line. I am told the geographical characteristics are such that a route could be laid out within certain reasonable latitudes, and we have done that without presuming to say that what we have put on the map is indeed the route, but we do think it is the area through which either route would pass within a close latitude.

At a point north of Buffalo Lake, the Railway location swings to the east to the lead-zinc deposit at Pine Point. The distance from Grimshaw to Pine Point is approximately 430 miles. A spur of approxi-









mately 40 miles is shown serving Hay River Harbour.

This proposed route falls in the Alberta Plains passing to the east of Watt Mountain at a point approximately 50 miles west of Fort Vermilion and skirting the western edge of the Caribou Mountains which lie to the north of Fort Vermilion.

A one per cent grade can readily be maintained except for the crossing of the Notikewin and Meikle Rivers whose valleys will require some grade development. Some difficulties with slide conditions may be experienced at these points and at other locations along the route because of soil conditions.

Gentlemen, there is supplementary material in part 2 dealing with this assertion, and, with your permission, I think I would like to have Mr. Grimble refer you to it.

MR. GRIMBLE: This is in the written form, but I will just give it to you in note form. The reference has been to the soil conditions along the Peace River route, and I might refer to the troubles at Dunvegan and Peace River town. This soil condition is probably prevalent right throughout as far north as the Meikle and Keg River. There is a slide condition now at Watino, Big Smoky River, and Little Smoky - -

THE CHAIRMAN: Would you mind telling us where those places are?

MR. GRIMBLE: The Watino is on the N.A.R.









line south of Peace River. Little Smoky is directly south of Peace River town. Dunvegan is upstream from Peace River town in Peace River Valley, and the slide conditions at Peace River town, themselves, occur in Pat Coulee where the highway goes into the town site. In this area the Peace River Valley is nearly 1,000 feet deep, and the soil is of the nature that slides. The railway or highway has to develop the grade, and the same thing applies to the Meikle River; the railway would develop the grade and it is susceptible to slide conditions. There are no slide conditions on the Waterways line. The only point there where slides are prevalent is a short stretch just before Waterways itself. The Meikle River Valley is 210 feet deep. In contrast to the Peace River town crossing of the Peace River we have the crossing of the Peace River at Peace Point. In this location the valley is 90 feet deep rather than 1,000 feet deep, and the soil conditions are not of this glacial till that is experienced at Peace River town. No grade development would be necessary to get into the river valley. The grade of the tracks would be practically level with the surrounding country. The Athabasca River at McMurray crossing does not involve a deep valley. It will not promote slide conditions. We mention these because of the fact of maintenance. The cost factor of construction is taken care of in the estimates and is not a factor. The other factor regarding these deep valleys is the operating gradients









that may be necessary to use to get in and out of the valleys, which is a problem over and above cost of construction.

THE CHAIRMAN: Mr. Grimble, you have given us the four places where slide conditions cause trouble: Dunvegan, Little Smoky, Big Smoky and Peace River. Those are all south of Grimshaw. Have you some reasons for thinking they exist into the north as well.

MR. GRIMBLE: They have trouble north of Fort St. John in the Beatton River Valley. These soil conditions are characteristic of this - -

THE CHAIRMAN: Have you made a study of them, yourself?

MR. GRIMBLE: Other than travelling through and observing them, I haven't studied them in detail.

THE CHAIRMAN: You have looked at them and seen them?

MR. GRIMBLE: Yes.

MR. CLEMENTS: I should say, Mr. Chairman, Mr. Grimble did a soil survey at Peace Point.

THE CHAIRMAN: You have made a survey, yourself, at Peace Point?

MR. GRIMBLE: Not a soil survey. I have done survey work.

MR. FOUKS: You mentioned Fort St. John: have you done a soil survey there?

MR. GRIMBLE: The slide conditions are there. You don't need a survey.









MR. FOUKS: I have an engineer from the P.G.E. who disagrees with that. He is the chief engineer from the P.G.E.

MR. GRIMBLE: There is no need to make a survey. The slides on the airport road down to the Beaton River Valley are obvious to the layman. The problem is obvious and it doesn't require a soil survey.

MR. FOUKS: I would hate to accept that kind of statement.

THE CHAIRMAN: The chief engineer is here?

MR. FOUKS: Yes, and he disagrees with the remarks in respect of the Fort St. John area.

THE CHAIRMAN: Is he here now?

MR. FOUKS: Yes, right here, Mr. Chairman.

MR. GRIMBLE: I might mention one other aspect. Our firm is retained on the Peace River Bridge at Taylor; we are closely associated with a slide problem which collapsed the bridge.

MR. FOUKS: Well, he is the chief engineer for the territory, and is is their daily - -

THE CHAIRMAN: It is Mr. who?

MR. FOUKS: Mr. Baldi.

THE CHAIRMAN: Mr. Baldi, would you mind letting us have your opinion on this subject now? I understand you have a different opinion?

MR. BALDI: There is a soil condition there, but as far as operating conditions are concerned, we have no trouble operating. We have equipment that keeps









the traffic moving, and certain improved methods like horizontal drilling and soil pipes take care of the situation.

THE CHAIRMAN: But is there any problem about expenditures - additional capital expenditures in building the railroad?

MR. BALDI: Not additionally, no. You just have to stabilize the slope.

THE CHAIRMAN: And' is that a difficult thing to do?

MR. BALDI: No, we haven't found it difficult

THE CHAIRMAN: Are you familiar with these rivers - the Notikewin and the Meikle River?

MR. BALDI: No, no.

MR. BALDWIN: In that regard, Mr. Chairman, I brought Mr. Homar Johnson, who is the retired superintendent of the Provincial Government on maintenance, who I think knows more than any other man, and who for 45 or 48 years has been the district engineer in the Peace River country, as a surveyor and also superintendent of maintenance for the province. He is here, and if this Commission would like to ask him any questions - as a matter of fact, I think Mr. Johnson laid out and surveyed a good part of the Mackenzie Highway, and if you want to ask him any questions now or later he would be glad to answer them.









MR. BISHOP: Mr. Chairman, wouldn't it be more in order if we were permitted to finish our presentation and bring up these other witnesses in rebuttal?

THE CHAIRMAN: I thought what we might do is just have it indicated what the contrary opinions are so that Mr. Grimble could deal with it now.

MR. GRIMBLE: The reason I mentioned this is the maintenance cost of keeping up a line that has this condition on it. I know the N.A.R. are concerned about the Watino Hill, and I know Highways Department have spent a lot of money on Pat Coulee, stabilizing the ground.

As far as the capital cost regarding the slide conditions, it might not be too big a factor, but I mentioned it as an operating problem of maintenance.

We may go on to some other features regarding the operating aspects of the lines. The obvious one, of course -- the route via Grimshaw is approximately 55 miles greater distance to Edmonton where the heavy tonnage is moved, and this in itself, of course, is an added expense. Besides this there are the greater gradients -- this is referred to later; I am one topic ahead of Mr. Clement.

MR. CLEMENT: Gravel for ballast along this route is in short supply since difficulties were experienced in obtaining gravel pits for highway









construction. Some native material for tie construction is available throughout most of the length of the route. The northern portion of the route from the Hay River to Pine Point is very poorly drained ground, but underlying soil conditions appear satisfactory.

The cost of construction has been estimated at approximately \$66 million. No great engineering difficulties can be foreseen to construct a railway on this location.

The Eastern route, starting at the end of steel of the N.A.R. at Waterways, crosses the Athabasca River upstream from the mouth of the Clearwater River near the Town of McMurray. It then proceeds along the west bank of the Athabasca River, to a point south of Lake Claire before swinging to the west of Lake Claire to cross the Peace River near Peace Point. From here it runs north to Bell Rock Harbour, west of Fort Smith. From Bell Rock it turns in a northwesterly direction to terminate at Pine Point.

The approximate distance from Waterways to Pine Point is 405 miles. This route also falls within the Alberta Plains, but throughout its entire length skirts the west edge of the Canadian Shield. Its route is primarily influenced by the Birch Mountains and Lake Claire. It skirts the easterly edge of the Birch Mountains which lie









to the west of the Athabasca River and then swings out to the west to avoid Lake Claire.

No great engineering difficulty is anticipated in obtaining a one per cent grade over the entire length of the route. The construction of major bridges over the Athabasca and the Peace Rivers present no great engineering difficulties since both offer satisfactory bridge sites.

No detailed exploration for gravel is known to have been carried out, but gravel in quantity has been found to be at McMurray and in the vicinity of Bell Rock Harbour. Satisfactory stands of spruce and pine for ties are located along the route.

The cost of construction over this route is estimated at approximately \$63 million. The above data have been confirmed by competent railway location engineers after a reconnaissance study.

THE CHAIRMAN: Are any of those opinions of railway engineers available?

MR. CLEMENT: I think, sir, our source of material is going to be in the submissions. Mr. Roblin of the firm represented by Mr. Grimble has spent most of his life on railway work, and he was of assistance in these matters, too.

THE CHAIRMAN: Are you calling him as a witness?

MR. CLEMENT: We can, sir; if it seems desirable we can bring him here. I don't know -- if









you are referring particularly to the \$66 million and \$63 million -- I think this was prepared particularly with the help of Mr. Roblin, and if you would wish him to be here, we can bring him along.

THE CHAIRMAN: Well, perhaps we can leave it until after we see what the railways say.

MR. FOUKS: Their figures are different, Mr. Chairman.

MR. CLEMENT: It may well be, and we are not presuming, of course, to take over the function of the railways in any respect; we are doing what we can to get the information before the Commission, and what is in here has been available to us, and it may be that the railways have revised their figures since the last information we have.

COMMISSIONER GAINER: One thing I want to be clear on -- are these figures, the 66 and the 63, determined independently of any railroad survey that has been carried out? These figures stem from the work of a firm now being represented here; is that it?

MR. CLEMENT: They have been substantiated by the professional consideration of the firm which has prepared them, yes.

COMMISSIONER GAINER: On the basis of the work carried on solely by the firm here; is that it? -- reconnaissance work?

MR. CLEMENT: Yes. Taking the assumptions









we have made on this line, and the knowledge that this firm has of not only railway construction but of terrain, these are the figures that seem appropriate to our advisers, yes.

COMMISSIONER GAINER: What I want to be clear on is this, that we should be getting another set tomorrow, perhaps. Will we have two independent sets of data here?

MR. CLEMENT: I am bound to say that I assume that the railways have gone into it in much more detail and with greater facilities than we have been able to in the short time at our disposal. After all, I understand they have had this under consideration for a great many years.

COMMISSIONER GAINER: I am wondering if your figures are independent figures; that is, have not been based on figures ---

MR. CLEMENT: If you give me just a moment.

The situation is this, gentlemen, that two members of this firm have themselves made reconnaissances prior to the railways' interest in it; they have also been up during railway reconnaissances, and with the information so gathered they have put these figures together as being a reasonable estimate from their professional knowledge of railway costs. I don't know that they have been particularly influenced by figures appearing in the newspapers, if that is what you mean.









COMMISSIONER GAINER: I hope our interest has been clear. It is just that it will be a matter of concern to us that we have, in fact, more than one independent set of estimates on construction.

THE CHAIRMAN: I would like to know a little more, Mr. Clement, about the type of reconnaissances carried out. For example, one engineer might make a 24-hour reconnaissance and give a perfectly bona fide opinion at the end of it, but he wouldn't give it so much attention as, perhaps, a month's reconnaissance.

MR. CLEMENT: May I have Mr. Grimble speak on that?

THE CHAIRMAN: Yes.

MR. GRIMBLE: I might say that I have been quite interested in this railway problem before they considered a railway seriously. Five years ago my work took me to Yellowknife, Hay River, Peace River about once a month, and I travelled these routes by the C.P.A. and private routes many times, and each time I armed myself with maps and showed an interest where the railway might go, even though the problem hadn't come up with the force it has now.

Then during the early railway reconnaissance I made various trips along the route, on the ground, looking at various locations. I might say that in 1946 I was actively engaged in the construction of the Grimshaw Highway and made trips along









the route on a jeep before it was built and while it was under construction.

THE CHAIRMAN: Was it during that time that you looked at these two valleys?

MR. GRIMBLE: And subsequently. I have been up there many times. I was in charge of the construction of the Meikle River bridge as the chief engineer and in charge of the bridge over the Nonacho River under contract.

THE CHAIRMAN: And it was at that time that you observed these?

MR. GRIMBLE: Yes, sir. As far as the details of location are concerned, I have been over the ground, on the ground over a large part of the western route and on the ground over part of the eastern route and the inaccessible portions of the route I have looked at from the air many times.

THE CHAIRMAN: In regard to the eastern route, this problem has arisen in the evidence we have had, that the ground just at the back of the Athabasca River appears to be almost level, but there are 23 rivers marked on the map which appear to be flowing into the Athabasca River from the west, and a lot of them seem to have pretty deep valleys, so if the railway were to be built beside the river it would involve 23 bridges, wouldn't it?

MR. GRIMBLE: Yes.

THE CHAIRMAN: One of the advocates of the









eastern route said: "Well, the thing to do would be to build the railway further back so that they would avoid them." But he wasn't sure what the ground conditions were; it might not be so level as it was nearer the river. Can you give us any help on that point?

MR. GRIMBLE: I can only say that I had an interest in the feasibility of building along the eastern route near the river, and I wasn't interested in building further back. The route I saw was quite satisfactory, I wasn't interested in looking further back, although in the detailed location this would be necessary.

THE CHAIRMAN: If you did build near the river, wouldn't there be quite a lot of bridges to be built?

MR. GRIMBLE: If you consider the problems of bridging the rivers on the eastern route, you can also see the problems of building bridges on the western route. The cost factor is taken into consideration, so this is not too great a factor at the present time. You would probably have ten more here of the same magnitude, same drainage area, same type.

THE CHAIRMAN: You feel there are more rivers along the proposed western route than there are along the proposed eastern route?

MR. GRIMBLE: Without counting them, I can









see that.

THE CHAIRMAN: Your route is right beside the river, is it?

MR. GRIMBLE: Yes.

THE CHAIRMAN: How close would you build to the river?

MR. GRIMBLE: On the first step back from the river. It goes in steps. I would say that is probably the most satisfactory location. I would think within two or three miles of the river bank itself.

THE CHAIRMAN: You would keep the railway within two or three miles of the river bank?

MR. GRIMBLE: Yes.

THE CHAIRMAN: And that is the route you observed?

MR. GRIMBLE: Yes, from the plane.

COMMISSIONER THOMPSON: Am I right in assuming that you made a route survey of that area as shown there?

MR. GRIMBLE: Not all the way; the inaccessible portions by plane -- around Lake Claire, for example. This was something I was doing as a matter of interest. If I was flying up there with a private plane I would ask him to go and have a look at this.

COMMISSIONER THOMPSON: You didn't have transits and line cutters?









MR. GRIMBLE: That hasn't been done by anybody. I don't think so.

COMMISSIONER THOMPSON: You were just looking at it as you went past it?

MR. GRIMBLE: There isn't a reconnaissance to do this.

COMMISSIONER THOMPSON: Were you doing this as a consulting engineer for some firm?

MR. GRIMBLE: A portion of it.

COMMISSIONER THOMPSON: The eastern route?

MR. GRIMBLE: There are portions of it I was dealing with as a consultant; the major portion of it I was dealing with as an interested engineer.

COMMISSIONER THOMPSON: What I would like to know -- I assume you were hired by some outfit to go and make this survey?

MR. GRIMBLE: I was interested, very much interested, in this country five years ago. At that time the railway wasn't an issue. I obtained the maps on my own, I flew the route with private plane and C.P.A. in my private work, and I looked at it quite carefully. I wrote an article for the railway a few years ago, before the MacGregor Report, about this eastern route. But I did this as an allocation rather than professionally.

MR. FOUKS: Did you ever write an article on the western route?

MR. GRIMBLE: In the same article I dealt









with both.

MR. FEEHAN: I don't know whether this is the proper time to ask a question, but Mr. Fouks has asked me to put it this way, whether this is nothing other than an educated guess, or whether there are actually some figures which have been taken down and added up to arrive at the figures which you arrive at?

MR. GRIMBLE: There have been figures taken, but my reconnaissance is an educated guess, based on experience.

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MR. FEEHAN: My next question would be as to the figures you have arrived at.

THE CHAIRMAN: Have you those figures?

MR. GRIMBLE: Not here, no.

THE CHAIRMAN: But you could get them?

MR. GRIMBLE: Yes.

MR. FOUKS: Could I have a copy, and could they be as detailed as possible?

THE CHAIRMAN: Yes, they will be filed as an exhibit.

MR. CLEMENT: Perhaps it would be appropriate, sir, to emphasize again that we have made an assumption as to a route which may not, indeed, be the route which will be proposed to you by the railways. I have no manner or means of knowing whether the railways would contemplate their line going into Bell Rock, which has a good harbour, and which is within a very short distance of Fort Smith. The figures which I understand have been put together include provision for improvement of the harbour at Bell Rock, but, however, those figures will be made available.

THE CHAIRMAN: Now let me ask you this, Mr. Grimble; I would gather from what you said that your knowledge of the proposed western route is a little more detailed than your knowledge of the proposed eastern route because of the fact that you were working on two bridges on the western route.

MR. GRIMBLE: All the bridges, sir.









THE CHAIRMAN: All the bridges. So, you spent a good deal more time along the western route than along the eastern route? You have been on the ground there?

MR. GRIMBLE: I would say I have been on the ground more on the western route than on the eastern route, but that was due to circumstances.

THE CHAIRMAN: Yes, but you did in that way get a much more detailed knowledge of the western route than you had of the eastern route?

MR. GRIMBLE: Yes, it would be easier to obtain.

THE CHAIRMAN: I was wondering about this, as to whether you have not, perhaps, with regard to the western route spotted most of the difficulties that are likely to be encountered, such as those two river valleys and the soil conditions. Is it possible, do you think, that there might be similar conditions along the eastern route which have not as yet appeared because nobody has gone on the ground to look at them?

MR. GRIMBLE: I would say on the Waterways line that the soil conditions would not indicate this feature.

THE CHAIRMAN: Have you had enough experience with the soil conditions up there to know?

MR. GRIMBLE: No-one has had any experience with the soils north of Waterways, although there is some sandy soil which would indicate no great problem









of stability.

THE CHAIRMAN: I am not sure that I understand you. Are you suggesting that the soil along the Athabasca River is of such a nature that you would not expect to run into any difficulties?

MR. GRIMBLE: There are 75 or 85 miles north of Waterways within the tar sands, and this type of material is not as unstable as the soil in the Peace River Valley, or Peace River town. So, there are 85 miles of the location which is of a type of soil with which we would not expect too much of a problem.

THE CHAIRMAN: What about the soil from there north?

MR. GRIMBLE: From Bitumont or the tar sands north to Birch Hills - - I cannot say I have been on the ground in that area, and I would only be guessing. I cannot tell you about that piece from Lake Clare down to the tar sands because I am not familiar with it on the ground, but we are confident, though, that our cost estimates are conservative enough to look after these problems.

THE CHAIRMAN: I have one other question to ask you about that. Is it possible as you attempt to build your railway, if you attempt to do so along that route, that you might find that you will have to make diversions which would add to the distance?

MR. GRIMBLE: Yes, but the distances are very conservatively estimated in both places. What









we have endeavoured to do - - this would sum it up, I imagine - - what we have endeavoured to do is to estimate the costs of both routes on the same sort of conservative basis. They are within a certain degree of accuracy, but they are both within the same degree of accuracy.

THE CHAIRMAN: Can they both be within the same degree of accuracy when you know so much less about the eastern route than you do about the western route?

MR. GRIMBLE: I have travelled up the western route - - let us speak in terms of miles. I have travelled up the western route from Grimshaw to where it crosses the Hay River, and this is approximately half its length. On the other side I have travelled from Fort Smith to Peace Point and along the Athabasca-Bitumont area which is, maybe, a third of its length. So, we are talking about a small fraction of difference in knowing it intimately. I do not think this is a factor.

THE CHAIRMAN: I was going to ask you this: In making an estimate of this kind you feel if you had a very good look at the ground you might be able to save quite a bit - - that is, build the railroad for quite a bit less - - but if you have not had that advantage then you might have to go a little bit higher than your estimate?

MR. GRIMBLE: Let us say that in both cases the estimates are conservative and the costs should not









be exceeded in either case.

MR. CLEMENT: If I may resume, then, sir:

It must be understood, however, that mileage and cost figures are only estimates though adequate for purposes of comparison. More accurate mileages and cost estimates could only be obtained after detailed comprehensive location studies were undertaken. No great construction difficulties should be experienced in the construction of either route and both could be constructed in a three year program. The south half of the Western Route would use the Mackenzie Highway for access during construction whereas the Eastern Route would use water transport, coupled with the existing road from Fort Smith to Peace Point.

The only significant operational factor on the new portion of the two routes, since both could be constructed to a one per cent grade, is the additional mileage associated with the Western Route. However, the operation will have a significant difference after the tie into the existing rail system due to the fact that the gradients on the existing N.A.R. line to Grimshaw are considerably heavier for both directions than on the Waterways line.

Mr. Grimble has referred to the fact that the Peace River at that point of crossing is close to 1,000 feet in depth. The grade, I am told, is a 2.4 per cent grade. Am I right, Mr. Grimble?

MR. GRIMBLE: Yes.









MR. CLEMENT: A 2.4 per cent grade on both sides. That is, it has to be climbed up, if you are going west, and it has to be climbed up if you are going east. As you know, sir, the size of that river valley makes for some of the most magnificent scenery in Alberta, and we have ample time to view it as we chug slowly up the railway.

THE CHAIRMAN: What about the other valley that has been mentioned?

MR. CLEMENT: I am sorry, but I missed that, sir?

THE CHAIRMAN: What is the situation with regard to the other valley Mr. Grimble has mentioned? Is it not the Big Smoky Valley?

MR. CLEMENT: Yes, I think it is a 1.9 per cent grade, which is on the cut-off point to Grande Prairie. It is on the route from Peace River town to Grande Prairie.

THE CHAIRMAN: That does not apply between Edmonton and Peace River?

MR. GRIMBLE: No, but it is mentioned here as the connection to the P.G.E. would involve a crossing of the Big Smoky which has a heavy grade.

MR. CLEMENT: There is an interesting statistic of this, sir, which perhaps Mr. Grimble might mention now. It bears on the - - I hate to feel I am trespassing on what the railways might bring forward, but, nevertheless it might be of interest to you at









this time, especially in view of the concern with which the railways view grades of any degree. Would you just mention that, Mr. Grimble?

MR. GRIMBLE: I, too, would not like to think I am taking this out of the railways' hands, but it is significant that on the C.N.R. mainline west of Edmonton, at what they call the Big Eddy Bridge, they are changing 11 miles of track in order to change the controlling grade from a 0.75 per cent grade to a 0.5 grade.









The railway was originally built with a  $\frac{1}{2}$  per cent grade, but when the bridge was reconstructed they changed it to the 0.75 -- increased it. This became the only point from here to Vancouver with this controlling grade, and the railways are spending \$1 $\frac{1}{2}$  million in changing 11 miles of track with the thought of eliminating this  $\frac{1}{4}$  per cent of gradient.

COMMISSIONER GAINER: What sort of tonnages would we be talking about and how many cars, until this becomes a significant factor on any one train, would you say?

MR. GRIMBLE: I hate to get into the railway picture of this, but I think that the type of train and tonnages we are talking about would probably increase the number of diesel units from two to four.

COMMISSIONER GAINER: That would be on main line operation. What I am getting at is, what sort of tonnages might one have to be moving over the N.A.R. line before a change in grade of the kind we have been talking about would really become significant?

MR. GRIMBLE: It would be significant ---

COMMISSIONER GAINER: Let us say 2 per cent as opposed to a one per cent grade.

MR. GRIMBLE: If it is a short stretch of grade, a velocity grade, and they could take a









run at it, it would not be too significant to have a piece of 2 per cent grade. This is a 7-mile grade at Peace River town; seven miles of 2.4, and with the problem of crossing the river on the bridge and going through the town -- so, it is by no means a velocity grade -- and with a short piece of grade they could overload their diesels for probably 15 minutes -- overload them probably 100 per cent for 15 minutes, and with a velocity grade, a short piece of 2 per cent would not be too difficult, such as on the Waterways line. There is a short piece, but the train can take a run at it and the diesels can be overloaded for this short period of time without any harm. I think if they had a train of 44 cars or more, they would be faced with the problem of extra engines.

COMMISSIONER GAINER: On the existing grade?

MR. GRIMBLE: On the 2.4 per cent grade. I use this figure because I saw in the paper the other night that the C.P.R. with their 2.4 in Yoho use four diesels, compared to 150-car trains on the C.N.R. which uses only two diesels.

COMMISSIONER GAINER: Thank you.

THE CHAIRMAN: That completes your brief with regard to the cost of the railways, doesn't it, Mr. Clement?

MR. CLEMENT: Almost, Mr. Chairman; there









is another sentence or two.

THE CHAIRMAN: Well, I think that has been dealt with.

MR. CLEMENT: Yes, orally it has been covered.

---Short recess.

MR. CLEMENT: Gentlemen, in order to clarify it there should be a word introduced on two pages. The bottom of page 9 of the submission, the sentence commences, "A one per cent grade can readily be maintained." For the purposes of accuracy I am told it should read "A controlling one per cent grade." The same change should be made on page 11, the second line of the second paragraph: "No great engineering difficulty is anticipated in obtaining a controlling one per cent grade . . ."

THE CHAIRMAN: Would you mind telling us what a controlling one per cent grade is?

MR. CLEMENT: Yes, sir. I am out of my depth here, but I understand that is the worst that could be anticipated.

THE CHAIRMAN: Perhaps Mr. Grimble can help us out?

MR. CLEMENT: Is that near the truth?

MR. GRIMBLE: You wouldn't build any greater grade than necessary, but you would strive to keep the maximum grade below one per cent.









MR. CLEMENT: II. Population Served.

The two routes would serve the following population that are now without railway service; (Figures from 1956 census):

The Western Route

Grimshaw to the Alberta Boundary 8375

I am of the view that perhaps this item is not within the Terms of Reference, but, nevertheless, we have put it in.

The Great Slave Lake Area 6212

North of Great Slave Lake 4646

Total 19,233

if you include the populations outside the Terms of Reference in the Grimshaw area.

The Eastern Route

In Alberta 1989

That is again subject to the same comment, and also the same comment in the Lake Athabasca area.

Lake Athabasca area 3636

In the vicinity of Fort Smith 1164

There has been an appreciable growth in Fort Smith since 1956. It is being developed as the administrative centre and there may be 300 or 400, perhaps, larger population there now than there was in 1956.

The Great Slave Lake Area 6212

North of Great Slave Lake 4646

Total 17,647

The population north of Grimshaw along









the western route is mainly engaged in agriculture. For the area involved, according to the 1956 census, there were 1,198 farms. A few people are occupied with lumbering, and the remainder live in the towns and villages serving this area and the Mackenzie Highway link.

I think probably this area is subject to the general trend that has been evidenced in western Canada of a diminution of the actual number of farms and the numbers of farmers by reason that each unit is becoming of larger acreage. It is a trend which has been noticeable that in order to make an economic area a greater area of land has to be comprised within each farm unit, and while we haven't actual figures on this aspect, I am suggesting that perhaps the ten-year trend which has been evidenced generally in western Canada may be reflected also in this area north of Grimshaw. If that is of any interest at all, perhaps I can assemble some figures for you.

THE CHAIRMAN: Mr. Baldwin, can you tell us what the population trend is there?

MR. BALDWIN: I wouldn't want to go into my own view since 1956; I may be prejudiced. However, looking at the MacGregor Royal Commission it does show that in Alberta there has been a trend downwards, but the Peace River country is the only place where that trend is not noticeable. That is









on page 18 of the MacGregor Report.

THE CHAIRMAN: Is that something you can accept, Mr. Clement?

MR. CLEMENT: Perhaps we can give it consideration and advise you, sir.

THE CHAIRMAN: Yes.

MR. CLEMENT: The population figures above also include all Indians and Metis living in this region of Alberta.

MR. FOUKS: Which region?

MR. CLEMENT: I am not departing from my brief.

MR. FOUKS: Well, the eastern or the western? It is slightly ambiguous, anyway.

MR. CLEMENT: It includes the Indian and Metis and along the eastern route and along the western route.

The population in that portion of Alberta north of Waterways served by the proposed eastern route is mainly occupied with lumbering, serving of transportation, fishing and mining. This region is not now served by road or rail at all and in the summer months is served only by water transportation. The construction of a pilot plant started this year in the Tar Sands should increase the population considerably.

The Report of the Royal Commission on the Development of Northern Alberta (facing page 90)









shows the regions of concentration of population for the year 1987. From this map it can be seen that the total estimated population in northern Alberta which would be served by the western route is approximately 50,000 and that served by the eastern railway route, in Alberta alone, would be approximately 40,000 not including any people living just across the border in Fort Smith, N.W.T. or in northern Saskatchewan.

I emphasize, sir, that this is the projected figures, and I have no means of knowing how projections of populations are made.

The next topic is the integration of proposed railway with present and projected transportation networks, and this is a portion of the brief to which we attach some importance.

### III. Integration of Proposed Railway with Present and Projected Transportation Networks

1. Highways: The northwest portion of Alberta and Hay River on Great Slave Lake is served by the Mackenzie Highway. This road is presently being reconstructed as a high standard heavy duty highway to allow trucking on an economical basis. Even now, loads of 45,000 pounds gross are allowed on this highway in its present poor condition, and in the winter, 56,000 pounds gross are the allowable from Grimshaw to Edmonton and 62,000 pounds gross from Edmonton to the United States border. The









Trans-Canada Highway's allowable is 72,000 pounds gross. The Mackenzie Highway is being rebuilt to the standards of the Trans-Canada Highway.

Amongst the material in Part Two is a letter from Grimshaw Trucking and Distributing Ltd, which perhaps would be of interest if I read it now.

"

7234 - 125 A Ave.,  
L.C. Depot #1,  
Edmonton, Alberta,  
September 10, 1959

File #20/1-3

Stanley Grimbale Roblin,  
8902 - 99 Street,  
Edmonton, Alberta.

Gentlemen:

"In reply to your request for some  
"figures showing the amount of freight we have  
"handled recently, I am pleased to relay the  
"following information.

\*All figures show northbound freight only.

\*All figures are shown in pounds.

\*The figures shown for 1959 are actual weights to the present date and estimated on present bookings and past figures to December 31, 1959.

	<u>1957</u>	<u>1958</u>	<u>1959</u>
From Edmonton	8,872,771	13,057,178	18,829,792
From Grimshaw	4,354,000	8,334,445	10,354,377
Difference	4,518,771	4,722,733	8,475,415

"A quick analytical look at these figures









show that there has been a marked increase each year from each point, however, you will notice the trend of the increase of freight originating in Edmonton as shown by the 'difference' column.

"Our rates from Edmonton to Grimshaw are competitive with the railroad in all respects, and in most cases, decisively better, with a few exceptions such as cement and flour, these are two commodities that the railroad has a very low commodity rate on.

"The heaviest traffic such as building material, structural steel and canned goods is being hauled mainly by truck because of a speedier service and the economy of this routing.

"The maximum weight allowable on the highways between Edmonton and Grimshaw is now 56,000 pounds, while from Grimshaw to the Northwest Territories it is only 45,000 pounds. If the gross weight limit on the Mackenzie Highway was increased from 45,000 pounds to 56,000 pounds, the present economical trucking rate structure which now exists between Edmonton and Grimshaw would then apply between Grimshaw and the Northwest Territories also.

"We feel that in the event of a railroad into the Northwest Territories our rates would be competitive and this is without a subsidy of the peoples money.









Yours truly,

GRIMSHAW TRUCKING & DISTRIBUTING LTD

"F. B. Hamilton"  
Vice-President."

---EXHIBIT NO. 52H: Letter from Grimshaw Trucking  
& Distributing Ltd. to Stanley,  
Grimble, Roblin, dated September  
10th, 1959.

MR. CLEMENT: I should observe, sir, the  
brief points out this Mackenzie Highway, on which there  
is now the 45,000-pound gross load limit, the brief  
states this road is presently being constructed as  
a high standard heavy duty highway to allow trucking  
on an economic basis, and it is my recollection of  
announcements made from time to time by the Depart-  
ment of Highways of the this province that within  
five years there will be a highway on which 72,000  
pounds gross may be transported running from the  
U.S. border to the Northwest Territories, which  
would bring the Mackenzie Highway, as well as the  
stretch from Edmonton north, up to Trans-Canada stan-  
dards of 72,000 pounds. This has a bearing on the  
economics of transport by truck which is a matter  
of grave consideration as far as the railways are  
concerned.

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Nearly two thirds of the supplies for the Great Slave Lake area and the Mackenzie River Valley move by truck along this highway, that is the Mackenzie Highway. Now that a high standard paved highway is nearly completed from Edmonton to Grimshaw, a larger portion each year of the traffic moving out of Hay River to the north is being handled direct from Edmonton by truck transport rather than trans-shipment from rail at Grimshaw.

THE CHAIRMAN: How have you calculated that? Have you got the figures from Northern Transportation?

MR. CLEMENT: This is not a Northern Transportation affair; we are talking about the Grimshaw side.

THE CHAIRMAN: Some of those supplies in these areas go north, by Northern Transportation.

MR. GRIMBLE: Yes. We have the figures from Waterways to Fort Smith, Northern Transportation, and the figures from Grimshaw north by the trucking company.

MR. CLEMENT: With a good standard highway from Grimshaw to Hay River the type of traffic presently moving by truck from Edmonton will continue to be handled to Hay River by this means regardless of which alternative railway route is constructed. Trucking rates will be set to meet any competition by rail and thus only those goods best suited for rail haul rather than highway transport, particularly those serving the mining industry, will move by rail to the Great









Slave Lake region.

There is presently under construction a highway which takes off approximately 28 miles south of Hay River on the Mackenzie Highway and proceeds west to cross the Mackenzie River near Fort Providence and carries on north to Fort Rae and Yellowknife around the west end of Great Slave Lake, and that is shown on map 2, part of the submission, and I think shows also on the large one, exhibit F:

<u>Present Highway Distances</u>		<u>Accumulative Total</u>
Edmonton to Grimshaw	321	321 miles
Grimshaw to Manning	55	376 miles
Manning to Enterprise	298	674 miles
Enterprise to Hay River	28	(Spur)
Enterprise to Fort Providence Ferry	59	733 miles
Fort Providence to Fort Rae	136	869 miles
Fort Rae to Yellowknife	62	931 miles

With the completion of this highway link to Yellowknife, the freight now handled by truck to Hay River will, in the summer, still move from Hay River to Yellowknife via "Fishyback", that is, by lake barge from May 15 to October 15 when the water transport season is open. During the freeze-up, no transport will serve the Yellowknife area since until January 1 the ice on the Mackenzie is not safe for crossing and









the ferry will not be able to operate after the ice starts forming in November. During the winter months from January 1 to approximately April 15th trucking to Yellowknife will go right through on the new highway. During spring break-up, that is for about four weeks in April and May, highway transport will again be interrupted.

There is a point here, sir, that perhaps you might wish to have Mr. Grimble heard on, and that is the matter of having year-round transport into Yellowknife, which is perhaps a matter of importance - year-round transportation facilities.

MR. GRIMBLE: It has been recently announced that the bridge over the Mackenzie will not be built and the ferry will be built there, so this service will continue as it is now. We are of the opinion that the best possibility for year-round highway service to Yellowknife is by virtue of an eastern route to Fort Smith. On map 2 you can see the announced highway program round the east end of the lake, Fort Reliance to Yellowknife. The possibilities of this route being a year-round route, without possibility of freeze-up on the Mackenzie, are greater long-term possibilities than by the western route. There is also the possibility of a dam being constructed at Fort Smith which will provide year-round transportation and connect with Fort Smith 12 months of the year.

THE CHAIRMAN: How does the bridge at Fort Smith compare with the bridge at Providence?

MR. GRIMBLE: A bridge at Fort Smith would









be less expensive than a bridge at Providence.

THE CHAIRMAN: Much less?

MR. GRIMBLE: It would range, from preliminary estimates, from two thirds to three quarters of the cost of a bridge at Providence, depending on location. There are three possible locations which would go within this range, depending on which location is selected. However, the possibilities of a dam at Fort Smith are good in the foreseeable future, 15 or 20 years. I would think that a dam would be built at Fort Smith than a bridge at Providence.

The mileages to the various areas would be of interest. The announced program of highways shows a spur going due north on 2, and the proposal is to extend this to Coppermine and the Arctic Ocean.

We have been discussing the eastern route and the eastern connection to a junction here. I might give you those mileages in round figures. The distance from Hay River to Yellowknife by this route is 300 miles, roughly 300 miles. The distance from - -

MR. CLEMENT: For the sake of the record, sir, that is around the west end of the lake.

MR. GRIMBLE: The distance from Hay River to the junction, which will then determine the distance from the highway to any point north, is 400 miles. The distance from Fort Smith to the junction is 375 miles.

MR. CLEMENT: That is around the east end of the lake.









MR. GRIMBLE: The east end, yes. That is 375 miles. Fort Smith to Yellowknife around the east end of the lake is 500 miles.

THE CHAIRMAN: How far is it from Edmonton to Yellowknife around the east side?

MR. GRIMBLE: There isn't any way of getting there now; there isn't a road at all.

THE CHAIRMAN: But the projected distance.

MR. GRIMBLE: By railroad, by combination of railroad and road?

THE CHAIRMAN: Yes.

MR. GRIMBLE: The distance from Edmonton to Waterways is 304 miles, 305; the distance from Waterways to Fort Smith is 290 miles, and the distance from Fort Smith to Yellowknife is 500 miles.

THE CHAIRMAN: About 1,100 miles.

MR. GRIMBLE 1,100 miles. To the junction would be, rather than 500, 375.

THE CHAIRMAN: How far is it from Yellowknife to the junction?

MR. GRIMBLE: 130 miles. These are approximate mileages; they are estimated mileages.

MR. BALDWIN: Mr. Chairman, before Mr. Grimble passes on, I don't suppose he has any figures to the Arctic. I am wondering if he had that information available or not.

MR. GRIMBLE: What sort of information? The mileage?









MR. BALDWIN: No, in figures on cost.

MR. GRIMBLE: No; I don't think there are any figures on cost announced. It has been announced that it is under construction to Mackay. That is a newspaper announcement.

THE CHAIRMAN: From Yellowknife to the junction is 130 miles?

MR. GRIMBLE: Yes, 130.

MR. CLEMENT: There is another aspect I would like to call on Mr. Grimble on, but I think I should perhaps read the next paragraph and he can carry on from there

There is presently no highway connection from the Mackenzie Highway to the Lake Athabasca District or Fort Smith. There is no highway connection from Edmonton to Waterways, nor along the Eastern Side of the northern portion of the Province. There is under construction, however, a good standard of highway - Fort Fitzgerald-Fort Smith-Bell Rock Harbour, which will serve as a portage road. There is also a good road from Fort Smith south to Pine Lake, a distance of 40 miles.

Now, there is a matter of access to Fort Smith by highway which Mr. Grimble would like to point out to you, your Lordship.

MR. GRIMBLE: I would like to suggest that if the eastern route was built to Fort Smith there would be possibly the deferment of the construction of this 170 miles of road plus this 170 miles of road from Peace Point to Fort Smith. This is roughly a 12 million









dollar expenditure. There has been a piece of clearing carried out in this stretch here, but only the clearing. This 240 miles would serve little purpose if it was built and the railroad was postponed for a matter of 10 or 12 years.

I would like to suggest that the money which would go into this route might be better spent at that time building a connection from Fort Smith to Uranium City as a year-round highway with the railway access to Fort Smith; a year-round highway from Fort Smith to Uranium City, a distance of approximately 110 miles, instead of building the 240 miles from Fort Vermilion corner to Fort Smith.

MR. FEEHAN: Sir, if I recall correctly, Mr. Taylor, the Minister of Highways, had a great deal to say about that road, and there wasn't any possibility of its cancellation. He mentioned it was under construction at the present time.

THE CHAIRMAN: That is the road from Fort Vermilion to Peace Point.

MR. FEEHAN: Yes.

THE CHAIRMAN: I take it, Mr. Grimble, you are suggesting that the construction should be stopped?

MR. GRIMBLE: The amount of construction undertaken to my knowledge is a clearance from Peace Point, a right-of-way from Peace Point to Fort Meridan and connecting from Mackenzie Highway east to serve Fort Vermilion. I would suggest that this clearing









would form an excellent road for buffalo, and the money would be better spent on this road to Uranium City.

MR. FEEHAN: I don't know if I should be speaking here, but one of them is a purely provincial matter and the other is a matter dealing with the Federal Government and the Saskatchewan Government.

COMMISSIONER GAINER: Isn't this a jointly financed venture?

MR. FEEHAN: I think that is true.

MR. CLEMENT: I am sure the Government would accommodate themselves best following the decisions of this Commission, sir.

A road presently extends from Pine Lake south to Peace Point and from Peace Point east to Scow Channel.

THE CHAIRMAN: Would you mind showing us where that is on the map?

MR. GRIMBLE: I would like to say as well that when we say a road we use the term fairly loosely. It is a trail.









MR. GRIMBLE: There is a graded road from Fort Smith to Pine Lake -- that is the dot half-way down -- and then there is a trail through the timber used by the game wardens to serve those points. We use the word "road" to mean a trail, and "highway" when we talk about a high standard road.

MR. CLEMENT: A road is now under construction ---

THE CHAIRMAN: Where is Hay Camp?

MR. GRIMBLE: Hay Camp is located at the mouth of the Hornaby River at the Slave River. It is about 20 miles south of Fort Fitzgerald.

THE CHAIRMAN: That just follows the river, does it?

MR. GRIMBLE: Yes.

MR. CLEMENT: A road is now under construction from Fort Fitzgerald to the Hay Camp and on to Scow Channel.

MR. GRIMBLE: There is some question of where Scow Channel is. Scow Channel is a cut-off channel between Peace River and Slave River, where the Peace flows into the Slave. The road we mention follows the river to Scow Channel, and joins this dotted road from Peace Point.

MR. CLEMENT: A location has been selected for a highway from Fort Smith northeast to Fort Reliance and tender calls have been advertised for the highway from Yellowknife to Fort Reliance.









In addition to this, a highway is contemplated from Thompson Landing on the northeast arm to connect with the highway west of Fort Reliance and also from a point near this junction, a highway north to Lake Mackay and eventually to the Arctic Ocean at the mouth of the Coppermine River. The whole length of this road from Yellowknife east to Fort Reliance and on to Fort Smith, and also the section north to the Coppermine would be within the Canadian Shield where many attractive mineral finds have been made. Further exploration and development will follow with better year-round access. It is obvious from Map No. 2 that with a railroad along the Waterways route, paralleling the Canadian Shield, rail service to the mining areas tapped by these proposed roads would funnel through Fort Smith.

THE CHAIRMAN: Would you kindly stop there. You say it is obvious that with a railroad along the Waterways route paralleling the Canadian Shield, rail service to the mining areas passed by these proposed roads would pass through Fort Smith. That is inevitable, and if the railway is built along the western route the service would be funnelled through somewhere else. What is the significance of that sentence?

MR. GRIMBLE: The sentence you refer to is: "It is obvious from Map No. 2 that with a railroad along the Waterways route paralleling the Canadian









Shield, a rail service to the mining areas tapped by these proposed routes would funnel through Fort Smith." The proposed road systems have been located purposely through the most attractive areas of the Canadian Shield, and they will be funneled through Fort Smith.

THE CHAIRMAN: And you are saying it is an advantage for it to be funneled through Fort Smith?

MR. GRIMBLE: It is not an advantage that it would funnel through Fort Smith, but that it would funnel to the railhead on the eastern route. The closest place to the Canadian Shield and the railroad would be Fort Smith. This is the area we are talking about so far as the Canadian Shield is concerned. It is logical, then, that transport and development would tend to take its route around the railhead at Fort Smith. It is logical, then, that this development work would finally go to Fort Smith and the railhead.

THE CHAIRMAN: Supposing a property were developed at Indian Mountain and a mill were built there, how do you think the concentrates would be taken out?

MR. GRIMBLE: If it proved economical to truck them they would be trucked out to the railhead at Fort Smith.

THE CHAIRMAN: Do you think that that would be more likely than stockpiling at Thompson Landing,









and then taken across the lake by barge?

MR. GRIMBLE: I think it would be a combination of both.

THE CHAIRMAN: And then, perhaps, up the Slave River to Bell Rock Harbour?

MR. GRIMBLE: I think it would be a combination of both. In the summer time they would prefer to ship it by water, and in the winter time they would be served in regard to supplies coming in and concentrates going out by truck to the rail-head.

THE CHAIRMAN: Can you give us figures on the relative costs of getting those concentrates down to Fort Smith by the two different ways?

MR. GRIMBLE: I could get them more accurately for you by Thursday.

COMMISSIONER THOMPSON: You mentioned a dam going in at Fort Smith. Why would you want a dam at Fort Smith?

MR. GRIMBLE: The potential of a low-cost hydro project at Fort Smith is so attractive that I would think within fifteen or twenty years it will go ahead.

COMMISSIONER THOMPSON: You mean you could get power at Fort Smith without controlling the Peace River? Where would you back the water up to with a dam at Fort Smith? It is my impression that you cannot get power at Fort Smith unless









you control the water on the Slave which can only be done by controlling -- have you a reservoir outside of the lake?

MR. GRIMBLE: The present thinking is a dam at Mountain Rapids high enough to back the water of Lake Athabasca approximately five or six feet deep, and that would give the best regulation of the river and allow the production of a million horse power of hydro. This would be a most economic development, and with long distance transmission would allow power from Fort Smith to be taken to Edmonton.

COMMISSIONER GAINER: I think what we are interested in, Mr. Grimble, is this: Is it possible to construct such a dam at present there without covering a tremendous area with a reservoir?

MR. GRIMBLE: The height of the dam in the project that I have mentioned would mean flooding a part of this road and, of course, backing up the water here into this area here, but there is nobody who would suffer greatly by this at this time.

COMMISSIONER GAINER: I see; it would flood a lot of flat land?

MR. GRIMBLE: Yes, it would flood a large area in here. The lake fluctuates now about five or six feet, and it would probably hold the lake at its high level, at which time there is water throughout this area here.

COMMISSIONER GAINER: Just from my casual









observation of the land around there would this be possible without a very long dam to control the area in reservoir?

MR. GRIMBLE: I am only guessing -- I do not know how wide that is there; I think it is 3,000 feet across the river at that point.

COMMISSIONER GAINER: What I find a little difficult to visualize is if we do dam the river, even for that distance, will it not back the water up to such an extent that you are flooding around the ends and you will, to a certain extent, have to extend your dam?

MR. GRIMBLE: No. As you know, the banks on this side are quite high and the banks on this side are somewhat lower but still adequate for this purpose.

THE CHAIRMAN: If you were to do that that would hold the waters of Lake Athabasca at their maximum height?

MR. GRIMBLE: I am not too sure -- it would raise the level of Lake Athabasca during low water by five or six feet, and I think it fluctuates by five or six feet. We could look that up if it is important, but the peak level of Lake Athabasca would be where you would control it.

THE CHAIRMAN: It might be important on a later matter. It might remove the problem of low water so far as transportation from McMurray and









Uranium City is concerned.

MR. GRIMBLE: It would probably eliminate the problem at the delta, but it would not eliminate the problem by any means in the lower reaches. The first 120 miles is the worst navigational feature of the river at the present time, and it could not possibly back the water up that far.

THE CHAIRMAN: But it would remove the difficulties at the delta, would it?

MR. GRIMBLE: Yes.

THE CHAIRMAN: I thought the evidence we had was that the delta was the only problem.

COMMISSIONER GAINER: Are you speaking of shallows in connection with difficulties in navigation, or in connection with other problems which shallow water might create?

MR. GRIMBLE: The limestone ridges across the Athabasca are probably the controlling feature. The delta is not the controlling feature of today's date, although in past years the delta has been a problem.

COMMISSIONER THOMPSON: The only evidence we have up to now is that navigational problems on the Athabasca are concerned with low water when you cannot get through the delta.

MR. GRIMBLE: The situation is that during the last year they have spent a considerable amount of money in straightening the channel out









into the lake. It is now a channel which is six or seven feet deep, and it is very straight and very good for navigation. It has presented no problem this year, and probably would not be serious in a low-water year, provided they can maintain it without too much dredging. But, this year, and in most years, the problem has been the 100 miles north of Waterways due to the limestone ridges. The delta problem for this year has been overcome.

THE CHAIRMAN: There are limestone ridges in the first 100 miles, are there?

MR. GRIMBLE: Yes.

COMMISSIONER THOMPSON: Mr. Grimble, your argument seems to have a close resemblance to the arguments we have been getting from Northern Affairs. Are you, by any chance, consulting with Northern Affairs?

MR. GRIMBLE: No.

COMMISSIONER THOMPSON: Your firm is not consulting ---

MR. GRIMBLE: No, this information I have obtained from transport companies operating on the river. I have obtained information from them regarding this navigational problem. I have talked to McGinnis Transport, who may be here tomorrow, and Northern Transport and the Hudson's Bay Company who used to operate on the Athabasca.

COMMISSIONER THOMPSON: We questioned









somebody as to why they did not dredge the bottom of the delta, and you say now it has been dredged?

MR. GRIMBLE: Yes.

COMMISSIONER THOMPSON: And we were told it would be a terrific expense to dredge it, but it has actually been dredged?

MR. GRIMBLE: Yes, and it is in very good shape now.

COMMISSIONER THOMPSON: Another party said it would just silt in, but it has been dredged?

MR. GRIMBLE: As of today's date it is a good, straight navigational channel, and there is no problem in navigating on the Athabasca River in the delta region.

COMMISSIONER THOMPSON: And when you start to go west at Fort Fitzgerald do you have to dredge there again?

MR. GRIMBLE: There is no navigational problem as of this date from the delta north.

COMMISSIONER THOMPSON: And once you get out of the delta -- if you raise the water by a dam you will not need to dredge, probably?

MR. GRIMBLE: That is right. It would improve navigation in the whole area of the delta. That is quite right.

THE CHAIRMAN: What were the transport companies you talked to?

MR. GRIMBLE: McGinnis Transport, Northern









Transport, and the former Hudson's Bay Transport.

THE CHAIRMAN: Hudson's Bay?

MR. CLEMENT: McGinnis bought it out. The Hudson's Bay Transport sold its public transport system to McGinnis, and McGinnis has been operating that aspect of it.

THE CHAIRMAN: Does McGinnis operate it as a public transport system, and not just for their own purposes?

MR. CLEMENT: McGinnis runs through a great stretch of these waterways.

COMMISSIONER GAINER: They are not public carriers, are they?

MR. CLEMENT: Yes. Without getting into a debate as to what a public carrier is I will say that they do transport goods for the public.

COMMISSIONER GAINER: I thought they were not classified as such.

MR. CLEMENT: Nothing seems certain these days. Apparently they did sell part to Northern Transport and part to McGinnis.

THE CHAIRMAN: Gunnar Gold have some barges on that water, have they not?

MR. GRIMBLE: I think Gunnar handles sulphur.

THE CHAIRMAN: Just sulphur?

MR. GRIMBLE: Yes. I am not certain, but I think they do.

THE CHAIRMAN: Well, we have lost track of









where you were, Mr. Clement.

MR. CLEMENT: Perhaps it saves time in the  
long run, sir.

THE CHAIRMAN: I interrupted you just when  
you had read the first five lines on page 18.

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MR. CLEMENT: The logical way to serve Uranium City from rail is by a road connection from Fort Smith to Uranium City making use of the present Fort Smith - Fort Fitzgerald road now under construction. Or alternatively, a winter road could be constructed at low cost on this location to allow river transport to Uranium City in the summer and rail and winter road serve in the winter. This would give a connection from Fort Smith to Prince Albert via the road now being constructed from Prince Albert to Uranium City. Hay River could be served by rail and road in the winter via the existing winter road from Pine Point to Hay River.

There is a further matter from part 2 which perhaps would be of interest here to you. It is a letter from Grimshaw Trucking and Distributing Limited, who operate at Edmonton, Hay River and Grimshaw, and it is dated September the 26th, 1959.

7324 - 125 A. Ave.,  
L.C. Depot # 1,  
Edmonton, Alta.,  
September 26, 1959.

Stanley Grimbale Roblin,  
8902 - 99 Street,  
Edmonton, Alberta.

Attn: Mr. Grimbale.

Gentlemen:

"In reply to your request for some information regarding our intentions towards Uranium City, if the









railroad was built into Fort Smith.

"We feel that we would welcome the opportunity of setting up a base of operations at Fort Smith for winter trucking into Uranium City. We also are quite certain that this would be profitable to us and economical to the business people and residents of Uranium City.

"Our past experience with trucking of this nature, places us in the enviable position of being able to evaluate this particular challenge with the open eyes of several years experience operating into Yellowknife, Snare Falls and Rayrock Mines in the N.W.T. Snare Falls and Rayrock Mines are approximately 150 miles North West of Yellowknife.

"To give you an indication of the size of this winter operation, there was an approximate amount of 7,000 tons total moved into these points from January 15 to the end of March during 1959.

"Should you require any further information, do not hesitate to contact us.

Yours truly, Grimshaw Trucking & Distributing Ltd. F. B. Hamilton, Vice-President."

THE CHAIRMAN: That will be exhibit 52 (1).

--- EXHIBIT NO. 52 (1)

Letter from Grimshaw Trucking & Distributing Ltd. to Stanley Grimble Roblin, dated September 26, 1959.

COMMISSIONER GAINER: Perhaps I wasn't clear









on the inference of this exhibit. Does this suggest that if a road were to be built from Fort Smith to Uranium City that this firm would be interested in-  
to going into Fort Smith?

MR. CLEMENT: I didn't quite gather that from it.. I think they were prepared to truck it in if the railroad got up to Fort Smith.

COMMISSIONER GAINER: Make their own way over it?

MR. FOUKS: Wouldn't they be better off doing it without a railroad? There would be no competition.

MR. GRIMBLE: This firm has been serving Yellowknife for three years on a road they built, in large part themselves. They visualize the same thing now that if a railroad goes into Fort Smith they will take the initiative and build a winter road into Uranium City.

COMMISSIONER GAINER: Would you know if this only applied to Fort Smith? Would it also apply to Peace Point and some other trans-shipment point that has been mentioned?

MR. GRIMBLE: I don't think they would operate from Peace Point to Uranium City, for various reasons. The distance from Peace Point is further to Uranium City than Fort Fitzgerald is.. Also, Peace Point is not as well established a community, with airport facilities, and so on, that Fort Smith is, and this









would be the second reason, I would think, that they would go to Fort Smith before they started their winter road to Uranium City.

THE CHAIRMAN: How far is it between those two points?

MR. GRIMBLE: From Fort Fitzgerald to Uranium City is 110 miles.

THE CHAIRMAN: How far from Fort Smith?

MR. GRIMBLE: From Fort Smith is another 16 miles.

THE CHAIRMAN: 126 miles?

MR. GRIMBLE: 126 miles.

THE CHAIRMAN: How far is it from Waterways or from McMurray to Uranium City?

MR. GRIMBLE: As the crow flies, sir?

THE CHAIRMAN: Yes.

MR. GRIMBLE: It is 28 inches on this map, and the scale is one inch to 20 miles - no, I am sorry; this scale was meant for reduction purposes. The scale of one inch to 20 is the scale you have in the back of your book. The actual scale is one inch to 8 miles; so, it is 8 times 28.

THE CHAIRMAN: Is the 126 miles from Fort Smith to Uranium City the distance as the crow flies?

MR. GRIMBLE: No, we have added some distance to that for twists and turns.

THE CHAIRMAN: What percentage of it?

MR. GRIMBLE: 10 per cent, I think it is;









10 per cent.

THE CHAIRMAN: Would you say, if you were going to build a winter road from Fort McMurray to Uranium City you would add 10 per cent to the 224 miles?

MR. GRIMBLE: Oh, no. It is out of the question.

THE CHAIRMAN: Why?

MR. GRIMBLE: They have tried from Meadow Lake, Saskatchewan, to get to Uranium City, and the obstacle of this lake is such is that they have abandoned it; they are not making a success of it. It is not a feasible operation. They built a winter road from here to here (indicating) in terms of using the lake, and that was not practicable.

THE CHAIRMAN: What attempts were made to use it? We have been told that only one attempt was made to take anything over, and that was just one vehicle.

MR. GRIMBLE: Well, the biggest problem in serving Yellowknife by winter road has been the crossing of the Northwest arm, and it is a very short distance in comparison to crossing Lake Athabasca. In winter-time, because of the prevailing winds, the road can be open one hour and closed the next hour.

MR. FEEHAN: By snow?

MR. GRIMBLE: It is not a heavy snow fall. It is a matter of blowing snow. The snow moves, and on the lake it would close in the road one hour behind the snow plough. It makes operations on the lake im-









practicable.

THE CHAIRMAN: There were operations carried on across the Great Slave Lake for a number of years?

MR. GRIMBLE: By tractor-train.

THE CHAIRMAN: But not by truck?

MR. GRIMBLE: Never by truck across the ice - not right across the middle, anyway. They have crossed the Northwest arm, and they have crossed Beaver Lake, but they have never taken a truck across the middle of the lake as a practicable operation.

THE CHAIRMAN: Do you remember who it was who said that, Mr. Feehan?

MR. FEEHAN: If I recall correctly, it was a young lady at the Courthouse who said she had driven her car across the lake in the wintertime at Yellowknife.

COMMISSIONER GAINER: We received evidence at some stage, I believe, from Uranium City interests, suggesting that trucking be undertaken across the winter ice.

MR. FEEHAN: Yes, that was suggested by the Board of Trade for Uranium City.

MR. GRIMBLE: I think they were thinking in terms of sneaking along the north shore of the lake - along the bank or along the ice. This is not as practical as taking it through the bush and behind the rocks.

THE CHAIRMAN: They thought it was quite









practicable to go through Peace Point down to Fort Chipewyan. They thought the storage facilities could be used at Fort Chipewyan during the summer, and then taken by truck along the north shore of Lake Athabasca after the freeze-up. Do you think they are mistaken in that?

MR. GRIMBLE: I would not think it was the most practical thing.

THE CHAIRMAN: Do you think it is impractical

MR. GRIMBLE: Yes, I would think it would be impractical; too much handling and it involves too much storage.

THE CHAIRMAN: Well, I wasn't thinking of the storage. I was thinking of trucking along the north shore.

MR. GRIMBLE: I imagine they would get by, but I don't think it would be desirable. I think this would be a short term expedient. If the wind reversed and came from this direction, it would be too difficult to keep open. The only way for a winter road is to keep within bush country and in the shelter of the rocks so that it stays open. The experience of a winter road from Fort Providence to Fort Rae was that every place it went through the bush it required no maintenance to keep it open; but, every point it got into the open stretches, or on the Northwest arm, there was a problem of sending a snow plough with every convoy.

MR. CLEMENT: It should be pointed out that









when this ultimate network of railways and highways is completed, goods best transported by truck will be able to move by highways and those goods best moved by railway, such as heavy ores, mining machinery and equipment, etc., would move by rail.

The closer the railroad is to the potential mining area of the Canadian Shield the better it can serve its function of carrying the mining industries' traffic.

THE CHAIRMAN: Mr. Clement, it is now quarter to five and perhaps we should adjourn.

MR. CLEMENT: Very well, sir.

--- Whereupon the hearing was adjourned at 4.45 p.m. until 10 a.m. tomorrow.



























